

[1] RN SEQUENCE FROM N.A.
RP STRAIN-BALB/C; TISSUE-BRAIN;
RC ROSSI D., HARDIMAN G., COPELAND N., GILBERT D.J., JENKINS N.,
RA ZLOTNIK A., BAZAN J.F.;
RL SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
RE EMBL; U92565; G2459677; -;
DR PFAM; PF00048; 118; 1.
SQ SEQUENCE 395 AA; 42040 MW; 3997A113 CRC32;

Query Match 95.2%; Score 80; DB 11; Length 395;
Best Local Similarity 90.0%; Pred. No. 6.81e-05;
Matches 9; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 74 CADPKKQWV 83
|||||:||||
QY 1 CADPKQKQWV 10

RESULT 3
ID O00175 PRELIMINARY; PRT; 119 AA.
AC O00175;
DT 01-JUL-1997 (TREMBLREL. 04, CREATED)
DT 01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE MPIF-2.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
[1]
RN SEQUENCE FROM N.A.
RA PATEL V.P., KREIDER B.L., LI Y., LI H., LEUNG K., SALCEDO T.,
RA NARDELLI B., PIPPALLA V., GENTZ S., THOTAKURA R., PARMELEE D.,
RA GENTZ R., GAROTTA G.;
RL J. EXP. MED. 0:0-0(0).
DR EMBL; U85768; G1916252; -;
DR PFAM; PF00048; 118; 1.
SQ SEQUENCE 119 AA; 13119 MW; CDF526F0 CRC32;

Query Match 86.9%; Score 73; DB 4; Length 119;
Best Local Similarity 80.0%; Pred. No. 2.19e-03;
Matches 8; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 74 CGDPKQEWQ 83
|||||:||||
QY 1 CADPKQKQWV 10

RESULT 4
ID O89093 PRELIMINARY; PRT; 97 AA.
AC O89093;
DT 01-NOV-1998 (TREMBLREL. 08, CREATED)
DT 01-NOV-1998 (TREMBLREL. 08, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE CC CHEMOKINE ST38 PRECURSOR.
DR LARC.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
[1]
RN SEQUENCE FROM N.A.
RA UTANS-SCHNEITZ U., LOREZ H., KLINKERT W.E.F., DA SILVA J.,
RA LESSLAUER W.;
RL "A novel rat CC chemokine, identified by targeted differential display, is upregulated in brain inflammation.";
DR J. NEUROIMMUNOL. 0:0-0(1998).
[2]
RN SEQUENCE FROM N.A.
RA VILLARES R.;
RL SUBMITTED (JUL-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; AF053333; G3551819; -;
DR EMBL; AJ007862; E1312757; -;
RN SIGNAL.

FT SIGNAL 1 27 POTENTIAL.
FT CHAIN 28 97 CC CHEMOKINE ST38.
SQ SEQUENCE 97 AA; 10826 MW; 053405BD CRC32;

Query Match 84.5%; Score 71; DB 11; Length 97;
Best Local Similarity 88.9%; Pred. No. 5.74e-03;
Matches 8; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 75 CADPKQNV 83
|||||:||||
QY 1 CADPKQKQWV 9

RESULT 5
ID O00585 PRELIMINARY; PRT; 134 AA.
AC O00585;
DT 01-JUL-1997 (TREMBLREL. 04, CREATED)
DT 01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE BETA CHEMOKINE EXODUS-2.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
[1]
RN SEQUENCE FROM N.A.
RA HROMAS R.A., GRAY P., KLEMSZ M., FIFE K., BROXMEYER H.;
RL SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
[2]
RN SEQUENCE FROM N.A.
RX MEDLINE; 97400322.
RA HEDRICK J.A., ZLOTNIK A.;
RT "Identification and characterization of a novel beta chemokine containing six conserved cysteines.";
RL J. IMMUNOL. 159:1589-1593(1997).
[3]
RN SEQUENCE FROM N.A.
RA HEDRICK J.A., ZLOTNIK A.;
RL SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
[4]
RN SEQUENCE FROM N.A.
RA NAGIRA M., IMAI T., HIESHIMA K., KUSUDA J., RIDANPAA M., TAKAGI S.,
RA NISHIMURA M., KAKIZAKI M., NOMIYAMA H., YOSHIE O.;
RL SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; U88320; G2196920; -;
DR EMBL; AF001979; G2624925; -;
DR EMBL; AB002403; D1022673; -;
DR PFAM; PF00048; 118; 1.
SQ SEQUENCE 134 AA; 14646 MW; FE86A239 CRC32;

Query Match 81.0%; Score 68; DB 4; Length 134;
Best Local Similarity 80.0%; Pred. No. 2.39e-02;
Matches 8; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 75 CADPKELWQ 84
|||||:||||
QY 1 CADPKQKQWV 10

RESULT 6
ID Q99664 PRELIMINARY; PRT; 95 AA.
AC Q99664;
DT 01-MAY-1997 (TREMBLREL. 03, CREATED)
DT 01-MAY-1997 (TREMBLREL. 03, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE CHEMOKINE EXODUS.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
[1]
RN SEQUENCE FROM N.A.
RA TISSUE-PANCREAS;
RX MEDLINE; 97275143.
RA HROMAS R., GRAY P.W., CHANTRY D., GODISKA R., KRATHWOHL M., FIFE K.,

BELL G.I., TAKEDA J., ARONICA S., GORDON M., COOPER S.,
 RA BROXMEYER H.E., KLEMSZ M.J.;
 RT "Cloning and characterization of exodus, a novel beta-chemokine.";
 RL BLOOD 89:3315-3322(1997).
 DR EMBL; U64197; G177817;
 DR PROSITE; PS00472; SWALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; I18; 1.
 SQ SEQUENCE 95 AA; 10691 MW; 1526B4C0 CRC32;
 Query Match 79.8%; Score 67; DB 4; Length 95;
 Best Local Similarity 77.8%; Pred. No. 3.82e-02;
 Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 73 CANPKQWV 81
 QY 1 CADPKQKW 9

RESULT 7
 ID P97884; PRELIMINARY; PRT; 96 AA.
 AC P97884;
 DT 01-MAY-1997 (TREMBLREL. 03, CREATED)
 DT 01-MAY-1997 (TREMBLREL. 03, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE CC CHEMOKINE EXODUS.
 OS RATTUS NORVEGICUS (RAT).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
 OC SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN-SPRAGUE-DAWLEY;
 RA KELNER G.S., MACIEJENSKI-LENOIR D., LEE E.D., MAKI R.A.;
 RL SUBMITTED (FEB-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [2]
 RP SEQUENCE FROM N.A.
 RC STRAIN-FISHER 344; TISSUE-BRAIN;
 RA UFRANS-SCHNEITZ U., LOREZ H., KLINKERT W.E.F., DA SILVA J.,
 RA LESSLAUER W.;
 RT "A novel rat CC chemokine, identified by targeted differential display, is upregulated in brain inflammation.";
 RL J. NEUROIMMUNOL. 0:0-0(1998).
 DR EMBL; U90447; G1899246; -;
 DR EMBL; AF053312; G3551817; -;
 DR PFAM; PF00048; I18; 1.
 KW SIGNAL.
 FT CHAIN
 SQ SEQUENCE 96 AA; 10875 MW; 3FC09DD8 CRC32;
 Query Match 79.8%; Score 67; DB 11; Length 96;
 Best Local Similarity 88.9%; Pred. No. 3.82e-02;
 Matches 8; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 74 CADPKQWV 82
 QY 1 CADPKQKW 9

RESULT 8
 ID O57411; PRELIMINARY; PRT; 97 AA.
 AC O57411;
 DT 01-JUN-1998 (TREMBLREL. 06, CREATED)
 DT 01-JUN-1998 (TREMBLREL. 06, LAST SEQUENCE UPDATE)
 DT 01-JUN-1998 (TREMBLREL. 06, LAST ANNOTATION UPDATE)
 DE LYMPHOTACTIN PRECURSOR.
 OS GALLUS GALLUS (CHICKEN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; ARCHOSAURIA; AVES;
 OC NEOGNATHAE; GALLIFORMES; PHASIANIDAE; PHASIANINAE; GALLUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE-SPLEEN;
 RA ROSSI D.L., BAZAN J.F., ZLOTNIK A.;
 RL SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; AF006742; G2827882; -;
 KW SIGNAL.

FT SIGNAL 1 24 POTENTIAL.
 FT CHAIN 25 97 LYMPHOTACTIN.
 SQ SEQUENCE 97 AA; 11131 MW; 3290101C CRC32;
 Query Match 78.8%; Score 66; DB 13; Length 97;
 Best Local Similarity 70.0%; Pred. No. 6.09e-02;
 Matches 7; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Db 73 CVHPEQKWV 82
 QY 1 CADPKQKWV 10

RESULT 9
 ID P78423; PRELIMINARY; PRT; 397 AA.
 AC P78423; 000672;
 DT 01-MAY-1997 (TREMBLREL. 03, CREATED)
 DT 01-MAY-1997 (TREMBLREL. 03, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE CX3C CHEMOKINE PRECURSOR.
 GN A-152E5.2.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
 OC CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 97177111.
 RA BAZAN J.F., BACON K.B., HARDIMAN G., WANG W., SOO K., ROSSI D.,
 RA GRAVES D.R., ZLOTNIK A., SCHALL T.J.;
 RT "A new class of membrane-bound chemokine with a CX3C motif.";
 RL NATURE 385:640-644(1997).
 RN [2]
 RP SEQUENCE FROM N.A.
 RA ADAMS M.D., LOFTUS B.J., ZHOU L., CROSBY M., FUHRMANN J., MASON T.M.,
 RA BRANDON R., KIM U.J., KERLAVAGE A.R., VENTER J.C.;
 RT "Homo sapiens chromosome 16 BAC clone CIT987SK-A-152E5.";
 RL SUBMITTED (JUN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; U91835; G1899259; -;
 DR EMBL; U84487; G1888523; -;
 DR EMBL; AC004382; G3252821; -;
 DR PFAM; PF00048; I18; 1.
 KW SIGNAL.
 FT CHAIN
 SQ SEQUENCE 397 AA; 42202 MW; C8093D7D CRC32;
 Query Match 78.6%; Score 66; DB 4; Length 397;
 Best Local Similarity 77.8%; Pred. No. 6.09e-02;
 Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 74 CADPKQWV 82
 QY 1 CADPKQKW 9

RESULT 10
 ID Q14745; PRELIMINARY; PRT; 80 AA.
 AC Q14745;
 DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
 DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
 DT 01-JAN-1999 (TREMBLREL. 09, LAST ANNOTATION UPDATE)
 DE LD78 ALPHA BETA PRECURSOR (FRAGMENT).
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
 OC CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE-BRAIN;
 RA ISHIZUKA K., IGATA-YI R., NARUSE K., NAKASHIMA H., OHUCHI K.,
 RA KATSURAGI S., KIN Y., OHMOTO Y., NOMIYAMA H., IIO M., MIURA R.,
 RA MIYAKAWA T.;
 RL SUBMITTED (AUG-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; D63785; D1010501; -;

Db 74 CSDPKLRWV 82
 : : : : :
 QY 1 CADPKQKWV 9

RESULT 13
 ID 043646 PRELIMINARY; PRT; 91 AA.
 AC 043646;
 DT 01-JUN-1998 (TREMBLREL. 06, CREATED)
 DT 01-JUN-1998 (TREMBLREL. 06, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE RANTES PRECURSOR.
 GN SCYA5.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC CATARRHINI; HOMINIDAE; HOMO.
 [1]
 RP SEQUENCE FROM N.A.
 RA JANG J.S., KIM B.E.;
 RL SUBMITTED (JAN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
 [2]
 RP SEQUENCE FROM N.A.
 RA NOMIYAMA H.;
 RT "Structure of a region of 181 kb containing five CC chemokine
 genes";
 RT SUBMITTED (AUG-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; AF043341; G2905632; -
 DR EMBL; AF088219; G3719366; -
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 KW SIGNAL.
 FT SIGNAL. 1 23 POTENTIAL.
 FT CHAIN 24 91 RANTES.
 SQ SEQUENCE 91 AA; 9990 MW; CF404FAD CRC32;
 FS

Query Match 71.4%; Score 60; DB 4; Length 91;
 Best Local Similarity 60.0%; Pred. No. 9.20e-01;
 Matches 5; Conservative 2; Mismatches 2; Indels 0;

Db 73 CANPEKKWVR 82
 : : : : :
 QY 1 CADPKQKWV 10

RESULT 14
 ID 055038 PRELIMINARY; PRT; 109 AA.
 AC 055038;
 DT 01-JUN-1998 (TREMBLREL. 06, CREATED)
 DT 01-JUN-1998 (TREMBLREL. 06, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE B LYMPHOCYTE CHEMOATTRACTANT BLC.
 DE MUS MUSCULUS (MOUSE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
 [1]
 RP SEQUENCE FROM N.A.
 RA STRAIN=C57BL/6J;
 XX MEDLINE; 98146056.
 XX GUNN M.D., NGO V.N., ANSEL K.M., EKLAND E.H., CYSTER J.G.,
 XX WILLIAMS L.T.;
 TT "A B-cell-homing chemokine made in lymphoid follicles activates
 TT Burkitt's lymphoma receptor-1";
 TT NATURE 391:799-803(1998).
 LR EMBL; AF044196; G2911374; -
 Q SEQUENCE 109 AA; 11927 MW; BB56CC22 CRC32;

Query Match 71.4%; Score 60; DB 11; Length 109;
 Best Local Similarity 50.0%; Pred. No. 9.20e-01;
 Matches 5; Conservative 3; Mismatches 2; Indels 0;

b 75 CYNPRAKWLQ 84
 : : : : :
 Y 1 CADPKQKWV 10

Sat Feb 5 12:04:58 2000

US-09-150-813-7.rspt

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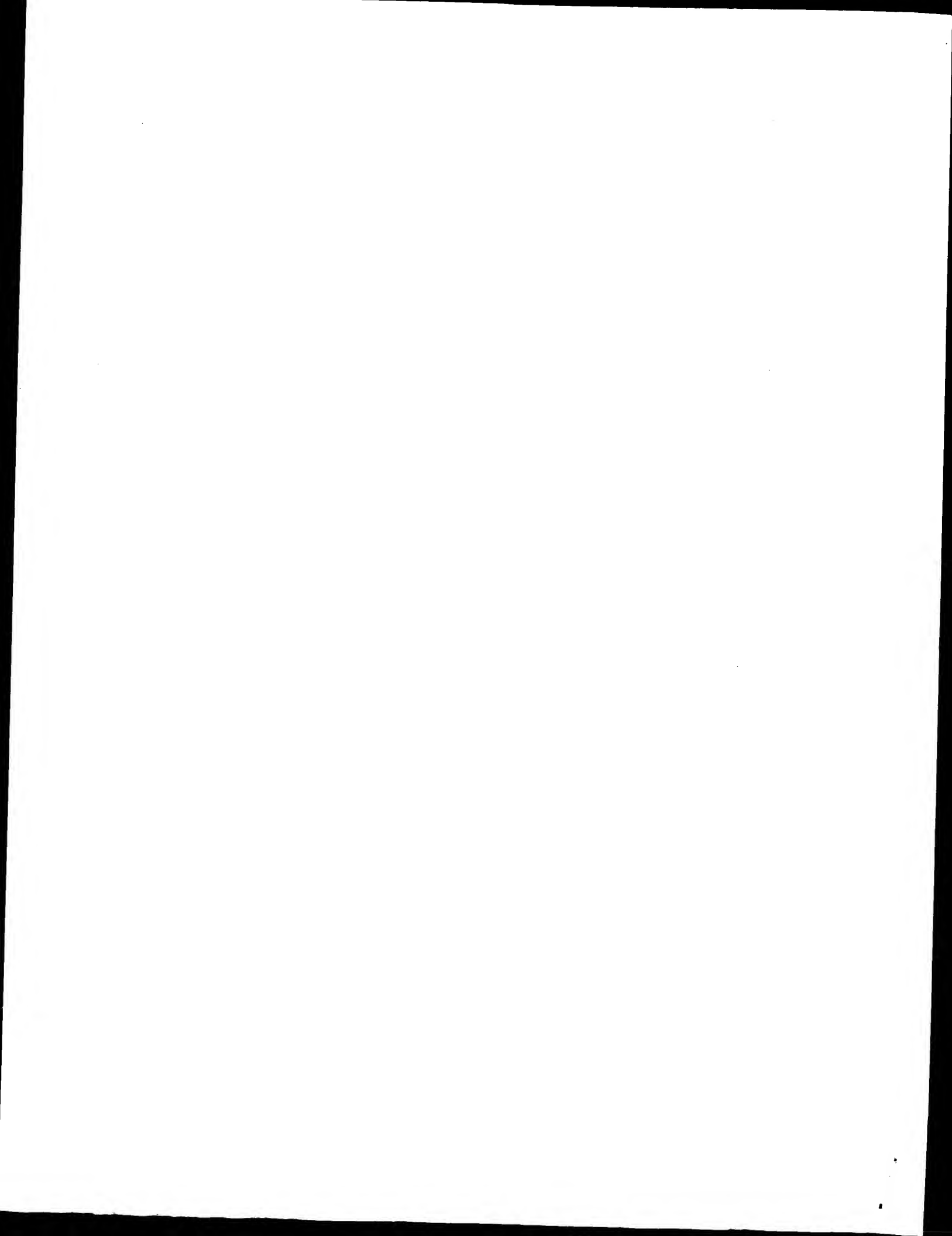
RESULT 15
ID O15467 PRELIMINARY; PRT; 120 AA.
AC O15467;
DT 01-JAN-1998 (TREMBLREL. 05, CREATED)
DT 01-JAN-1998 (TREMBLREL. 05, LAST SEQUENCE UPDATE)
DT 01-JAN-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE IL-10-INDUCIBLE CHEMOKINE.
GN ILINCK OR SCYAL6.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RA HEDRICK J.A., HELMS A., GORMAN D., ZLOTNIK A.;
RL SUBMITTED (NOV-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [2]
RP SEQUENCE FROM N.A.
RA SHODAI K., HIESHINA K., FUKUDA S., IIO M., MIURA R., IMAI T.,
RL TISSUE=LIVER;
RA YOSHIE O., NOMIYAMA H.;
RL BIOCHIM. BIOPHYS. ACTA 0:0-0(1998).
RN [3]
RP SEQUENCE FROM N.A.
RA NOMIYAMA H.;
RL "Structure of a region of 181 kb containing five CC chemokine
genes";
RT genes";
RL SUBMITTED (AUG-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [4]
RP SEQUENCE FROM N.A.
RX MEDLINE; 98308096.
RA YOUNG B.S., ZHANG S., BROXMEYER H.E., ANTOL K., FRASER M.J. JR.,
RA HANGOC G., KWON B.S.;
RT "Isolation and characterization of LMC, a novel lymphocyte and
monocyte chemoattractant human CC chemokine, with myelosuppressive
activity";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 247:217-222(1998).
DR EMBL; U91746; G2581781; -
DR EMBL; AB007454; D1024963; -
DR EMBL; AF088219; G3719365; -
DR EMBL; AF055467; G3395776; -
DR PFAM; PF00048; i18; 1.
KW SIGNAL.
SQ SEQUENCE 120 AA; 13600 MW; A079DF66 CRC32;

Query Match 70.2%; Score 59; DB 4; Length 120;
Best Local Similarity 50.0%; Pred. No. 1.43e-00;
Matches 5; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 76 CTNPDWVQ 85
Qy 1 CADPKQWVQ 10

Search completed: Fri Feb 4 17:00:18 2000
Job time : 32 secs.

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ALIGNMENTS

Query Match 67.6%; Score 69; DB 6; Length 97;
Best Local Similarity 50.0%; Pred. No. 1.63e-02;
Matches 4; Mismatches 2; Indels 0;
Conservative 5;

75 EVCLNPHTKWWQ 86
:|:|:| |:|
1 QVCIDPKLKWIQ 12

RESULT 2
7D 055038
PRELIMINARY: PRT: 109 AA.

01-JUN-1998 (TREMREL. 06, CREATED)
01-JUN-1998 (TREMREL. 06, LAST SEQUENCE UPDATE)
01-JUN-1998 (TREMREL. 06, LAST SEQUENCE UPDATE)
01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
B IYMBHOCYTE CHEMOATTRACTANT BLC.

OS
OC
OC
MUS MUSCULUS (MOUSE).
EUKARYOTA; METAZA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
SCIUROGNATHI. MURIDAE; MURINAE; MUS.

RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6J;
RX MEDLINE; 98146056.
RA GUNN M.D.; NGO V.N

RX MEDLINE; 98146056.
CUNN M D NCO V N ANSEL K M EKLAND E H CYSTER J G

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psrch_pp protein - protein database search, using Smith-Waterman algorithm
Run on:      Fri Feb 4 17:04:22 2000;      MasPar time 5.13 Seconds
          127.601 Million cell updates/sec
          Tabular output not generated.

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>US-09-150-813-38
(1-12) from US09150813.pcp
102
1 QVCIDPCLKWQ 12
Sequence:
```

Scoring table: PAM 150
Gap 15

searched: 179066 seqs, 54579741 residues

Post-processing: Minimum Match 0% Listing first 45 summaries

Database:

sptrml9

1:sp_archea 2:sp_bacteria 3:sp_fungi 4:sp_human
5:sp_invertebrate 6:sp_mammal 7:sp_mhc 8:sp_organelle
9:sp_phage 10:sp_plant 11:sp_rodent 12:sp_unclassified
13:sp_vertebrate 14:sp_virus

```

statistics:
  Mean 26.040:  Variance 34.545;  scale 0.754

```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description	Pred. No.
1	69	67.6	97	6	062812	INTERLEUKIN-8 (FRAGEN	1.63e-02
2	69	67.6	109	11	055038	B LYMPHOCYTE CHEMOKIN	1.63e-02
3	67	65.7	109	4	043927	CXC CHEMOKINE PRECURSOR	4.32e-02
4	66	64.7	101	13	093238	CC CHEMOKINE-1.	6.99e-02
5	65	63.7	97	13	057411	LYMPHOTACTIN PRECURSOR	1.13e-01
6	65	63.7	395	11	035933	FRACTALKINE.	1.13e-01
7	65	63.7	395	11	035188	NEUTROTACTIN.	1.13e-01
8	63	61.8	80	4	047445	LD78 ALPHA BETA PRECUR	2.89e-01
9	63	61.8	1325	10	064533	YUP8H12R.20.	2.89e-01
10	62	60.8	91	4	043646	RANTES PRECURSOR..	4.61e-01
11	62	60.8	129	8	036474	ORE31.	4.61e-01
12	62	60.8	203	14	067634	ECO Q PROTEIN (FRAGEN	4.61e-01
13	61	59.8	97	11	089093	CC CHEMOKINE ST38 PREC	7.30e-01
14	60	58.8	478	3	006640	CHROMOSOME IV COSMID 9	1.15e+00
15	59	57.8	93	4	000626	MACROPHAGE-DERIVED CHE	1.81e+00
16	59	57.8	119	4	000175	MP1F-2.	1.81e+00
17	58	56.9	350	3	006151	CHROMOSOME XII COSMID	2.83e+00
18	58	56.9	666	5	076167	RECEPTOR TYROSINE KINA	2.83e+00
19	58	56.9	899	4	013527	PROHORMONE CONVERTASE	2.83e+00
20	58	56.9	915	4	092824	PCGA PROTEASE..	2.83e+00

RA WILLIAMS L.T.;
 RT "A B-cell-homing chemokine made in lymphoid follicles activates
 Burkitt's lymphoma receptor-1";
 RL NATURE 391:799-803(1998).
 DR EMBL: AF044196; G2911374; -.
 SQ SEQUENCE 109 AA; 11927 MW; BB6CC22 CRC32;
 Query Match 67.68; Score 69; DB 11; Length 109;
 Best Local Similarity 45.58; Pred. No. 1.63e-02;
 Matches 5; Conservative 5; Mismatches 1; Indels 0; Gaps 0;
 Db 74 ICVNPRAKWLQ 84
 QY 2 VCIDPKLKWQ 12
 RESULT 3
 ID O43927 PRELIMINARY; PRT; 109 AA.
 AC O43927;
 DT 01-JUN-1998 (TREMREL. 06, CREATED)
 DT 01-JUN-1998 (TREMREL. 06, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
 DE CXC CHEMOKINE PRECURSOR.
 GN BCA-1.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
 OC CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 98130629.
 RA LEGIER D.F., LOETSCHER M., STUBER ROOS R., CLARK-LEWIS I.,
 RA BAGGIOLINI M., MOSER B.;
 RT "B cell-attracting chemokine 1, a human CXC chemokine expressed in
 lymphoid tissues, selectively attracts B lymphocytes via
 BLR1/CXCR5";
 RT J. EXP. MED. 187:655-660(1998).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 98146056.
 RA GUNN M.D., NGO V.N., ANSEL K.M., EKLAND E.H., CYSTER J.G.,
 RA WILLIAMS L.T.;
 RT "A B-cell-homing chemokine made in lymphoid follicles activates
 Burkitt's lymphoma receptor-1";
 RL NATURE 391:799-803(1998).
 RN [3]
 RP SEQUENCE FROM N.A.
 RA NAPOLITANO M., SPINETTI G., GAETANO C., CAPOGROSSI C.M.;
 RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL: AJ002211; E1249325; -.
 DR EMBL: AF044197; G2911376; -.
 DR EMBL: AF029894; G3169814; -.
 KW SIGNAL.
 FT SIGNAL 1 22 POTENTIAL.
 FT CHAIN 23 109 POTENTIAL.
 SQ SEQUENCE 109 AA; 12664 MW; BES4468C CRC32;
 Query Match 65.78; Score 67; DB 4; Length 109;
 Best Local Similarity 63.68; Pred. No. 4.32e-02;
 Matches 7; Conservative 1; Mismatches 3; Indels 0; Gaps 0;
 Db 75 VCVDPQAEWQ 85
 QY 2 VCIDPKLKWQ 12
 RESULT 4
 ID O93238 PRELIMINARY; PRT; 101 AA.
 AC O93238;
 DT 01-NOV-1998 (TREMREL. 08, CREATED)
 DT 01-NOV-1998 (TREMREL. 08, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
 DE CC CHEMOKINE-1.
 OS CYPRINUS CARPIO (COMMON CARP).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
 OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=BALB/C; TISSUE=BRNIN;
 RA ROSSI D., HARDIMAN G., COPELAND N., GILBERT D.J., JENKINS N.,
 RA ZLOTNIK A., BAZAN J.F.;
 RL SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL: U92565; G2459677; -.
 DR EMBL: PF00048; I18; 1.
 SQ SEQUENCE 395 AA; 42040 MW; 3997A113 CRC32;
 Query Match 63.78; Score 65; DB 11; Length 395;
 Best Local Similarity 70.08; Pred. No. 1.13e-01;
 Matches 5; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; ACTINOPTERYGII; NEOPTERYGII;
 OC TELEOSTEI; EUTELEOSTEI; OSTARIOPHYSI; CYPRINIFORMES; CYPRINOIDEA;
 OC CYPRINIDAE; CYPRININAE; CYPRINUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RA FUJIKI K., NAKAO M., SHIN D., YANO T.;
 RT "cDNA cloning of a carp CC chemokine homologous to mammalian
 eotaxins";
 RL SUBMITTED (JUN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL: AB010469; D1032417; -.
 SQ SEQUENCE 101 AA; 11266 MW; 9CFBD540 CRC32;
 Query Match 64.78; Score 66; DB 13; Length 101;
 Best Local Similarity 66.78; Pred. No. 6.99e-02;
 Matches 6; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
 Db 74 CSDPKLRWV 82
 QY 3 CIDPKLKI 11
 RESULT 5
 ID O57411 PRELIMINARY; PRT; 97 AA.
 AC O57411;
 DT 01-JUN-1998 (TREMREL. 06, CREATED)
 DT 01-JUN-1998 (TREMREL. 06, LAST SEQUENCE UPDATE)
 DT 01-JUN-1998 (TREMREL. 06, LAST ANNOTATION UPDATE)
 DE LYMPHOTACTIN PRECURSOR.
 OS GALLUS GALLUS (CHICKEN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; ARCHOSAURIA; AVES;
 OC NEOGNATHAE; GALLIFORMES; PHASIANIDAE; PHASIANINAE; GALLUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=SPLEEN;
 RA ROSSI D.L., BAZAN J.F., ZLOTNIK A.;
 RL SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL: AF006742; G2827882; -.
 KW SIGNAL.
 FT SIGNAL 1 24 POTENTIAL.
 FT CHAIN 25 97 LYMPHOTACTIN.
 SQ SEQUENCE 97 AA; 11131 MW; 3290101C CRC32;
 Query Match 63.78; Score 65; DB 13; Length 97;
 Best Local Similarity 41.78; Pred. No. 1.13e-01;
 Matches 5; Conservative 4; Mismatches 3; Indels 0; Gaps 0;
 Db 71 RICVHPQKWKQ 82
 QY 1 QVCIDPKLKI 12
 RESULT 6
 ID O35933 PRELIMINARY; PRT; 395 AA.
 AC O35933;
 DT 01-JAN-1998 (TREMREL. 05, CREATED)
 DT 01-JAN-1998 (TREMREL. 05, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
 DE FRACTALKINE.
 OS MUS MUSCULUS (MOUSE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=BALB/C; TISSUE=BRNIN;
 RA ROSSI D., HARDIMAN G., COPELAND N., GILBERT D.J., JENKINS N.,
 RA ZLOTNIK A., BAZAN J.F.;
 RL SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL: U92565; G2459677; -.
 DR EMBL: PF00048; I18; 1.
 SQ SEQUENCE 395 AA; 42040 MW; 3997A113 CRC32;
 Query Match 63.78; Score 65; DB 11; Length 395;
 Best Local Similarity 70.08; Pred. No. 1.13e-01;
 Matches 5; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

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Matches 7; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Db 74 CADPKEKWQ 83
1 |||||
Qy 3 CIDPKLKWQ 12

RESULT 7
ID O35188 PRELIMINARY; PRT; 395 AA.

AC O35188;
DT 01-JAN-1998 (TREMREL. 05, CREATED)
DT 01-JAN-1998 (TREMREL. 05, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
DE NEURORACTIN.
GN SCYD1.

OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.

RN SEQUENCE FROM N.A.
RP MEDLINE; 97320498.
RA PAN Y., CLARE L., HONG Z., DOLICH S., DEEDS J., GONZALO J., VATH J.,
RA GOSSELIN M., MA J., DUSSAULT B., WOLF B., ALPERIN A., CULPEPPER J.,
RA GUTTEREZ-RAMOS J.C., GEARING D.;

RT "Neurotactin, a membrane-anchored chemokine upregulated in brain
inflammation";
RL NATURE 387:611-617(1997).
DR EMBL; AF010586; G2317698; -
DR MGD; MGI:1097153; SCYD1.
DR PFAM; PF00048; i18; 1.
SQ SEQUENCE 395 AA; 42098 MW; E3CD0612 CRC32;

Query Match 63.7%; Score 65; DB 11; Length 395;
Best Local Similarity 70.0%; Pred. No. 1.13e-01;
Matches 7; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Db 74 CADPKEKWQ 83
1 |||||
Qy 3 CIDPKLKWQ 12

RESULT 8
ID O14745 PRELIMINARY; PRT; 80 AA.

AC O14745;
DT 01-NOV-1996 (TREMREL. 01, CREATED)
DT 01-NOV-1996 (TREMREL. 01, LAST SEQUENCE UPDATE)
DT 01-JAN-1999 (TREMREL. 09, LAST ANNOTATION UPDATE)
DE LD78 ALPHA BETA PRECURSOR (FRAGMENT).
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.

RN SEQUENCE FROM N.A.
RP TISSUE-BRAIN;
RA ISHIZUKA K., IGATA-YI R., NARUSE K., NAKASHIMA H., OHUCHI K.,
RA KATSURAGI S., KIN Y., OHMOTO Y., NOMIYAMA H., IIO M., MIURA R.,
RA MIYAKANA T.;

RL SUBMITTED (AUG-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; D63785; D1010501;
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; i18; 1.
KW SIGNAL.
FT NON_TER 1
FT SIGNAL <1 16
FT CHAIN 17 >80
FT NON_TER 80
SQ SEQUENCE 80 AA; 8857 MW; 3F87F1C6 CRC32;

Query Match 61.8%; Score 63; DB 4; Length 80;
Best Local Similarity 58.3%; Pred. No. 2.89e-01;
Matches 7; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

Db 65 QVCADPSEWQ 76

Qy 1 QVCIDPKLKWQ 12
1 |||||
1 |||||

RESULT 9
ID O64533 PRELIMINARY; PRT; 1325 AA.

AC O64533;
DT 01-AUG-1998 (TREMREL. 07, CREATED)
DT 01-AUG-1998 (TREMREL. 07, LAST SEQUENCE UPDATE)
DT 01-AUG-1998 (TREMREL. 07, LAST ANNOTATION UPDATE)
DE YUP8H12R.20.
GN YUP8H12R.20.

OS ARABIDOPSIS THALIANA (MOUSE-EAR CRESS).
OC EUKARYOTA; VIRIDIPHYTES; STREPTOPHYTA; EMBRYOPHYTA; TRACHEOPHYTA;
OC EUPHYLLIPHYTES; SPERMATOPHYTA; MAGNOLIOPHYTA; EUDICOTYLEDONS; ROSIDAE;
OC CAPPARALES; BRASSICACEAE; ARABIDOPSIS.

RN SEQUENCE FROM N.A.
RP STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.; VYSOTSKAIA V.S.; OSBORNE B.I.; SCHWARTZ J.R.;
RA FEDERSPIEL N.A.; KWAN A.; TORIUMI M.; YU G.; OJI, O. ARAUJO R.,
RA CHUNG E., DEWER K., DIETRICH F., ECKER J.R., MARZIALI A., OEFNER P.,
RA DAVIS R.W.;

RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (SEP-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [3]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [4]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [5]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [6]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [7]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [8]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [9]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [10]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [11]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [12]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [13]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [14]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [15]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [16]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [17]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [18]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [19]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [20]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [21]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [22]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [23]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [24]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. COLUMBIA;
RA THEOLOGIS A.;
RL SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RA NOMIYAMA H.;
 RT "Structure of a region of 181 kb containing five CC chemokine
 RL genes";
 DR SUBMITTED (AUG-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; AF043341; G2905632; -;
 DR EMBL; AF088219; G3719366; -;
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 KW SIGNAL.
 FT CHAIN 1 23 POTENTIAL.
 FT CHAIN 24 91 RANTES.
 SQ SEQUENCE 91 AA; 9990 MW; CF404FAD CRC32;
 Query Match 60.8%; Score 62; DB 4; Length 91;
 Best Local Similarity 50.0%; Pred. No. 4.61e-01;
 Matches 6; Conservative 3; Mismatches 3; Indels 0; Gaps 0;
 Db 71 QVCANPEKKWVR 82
 |||||
 QY 1 QVCIDPKLWQ 12
 |||||
 RESULT 11
 ID Q36474 PRELIMINARY; PRT; 129 AA.
 AC Q36474;
 DT 01-NOV-1996 (TREMELREL. 01, CREATED)
 DT 01-NOV-1996 (TREMELREL. 01, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMELREL. 08, LAST ANNOTATION UPDATE)
 DE ORF31.
 OS PODOPORA ANSERINA.
 OG MITOCHONDRION.
 OC EUKARYOTA; FUNGI; ASCOMYCOTA; EUASCOMYCETES; PYRENOMYCETES;
 OC SORDARIALES; SORDARIACEAE; PODOPORA.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 89063443.
 RA CUMMINGS D.J., DOMENICO J.M., MICHEL F.;
 RT "DNA sequence and organization of the mitochondrial ND1 gene from
 RT Podospora anserina: analysis of alternate splice sites.";
 RL CURR. GENET. 14:253-264(1988).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 89178752.
 RA CUMMINGS D.J., DOMENICO J.M., NELSON J.;
 RT "DNA sequence and secondary structures of the large subunit rRNA
 RT coding regions and its two class I introns of mitochondrial DNA from
 RT Podospora anserina.";
 RL J. MOL. EVOL. 28:242-255(1989).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 88118920.
 RA TURKER M.S., DOMENICO J.M., CUMMINGS D.J.;
 RT "Excision-amplification of mitochondrial DNA during senescence in
 RT Podospora anserina. A potential role for an 11 base-pair consensus
 RT sequence in the excision process.";
 RL J. MOL. BIOL. 198:171-185(1987).
 RN [4]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 89125610.
 RA CUMMINGS D.J., DOMENICO J.M.;
 RT "Sequence analysis of mitochondrial DNA from Podospora anserina.
 RT Pervasiveness of a class I intron in three separate genes.";
 RL J. MOL. BIOL. 204:815-839(1988).
 RN [5]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 89178751.
 RA CUMMINGS D.J., DOMENICO J.M., NELSON J., SOGIN M.L.;
 RT "DNA sequence, structure, and phylogenetic relationship of the small
 RT subunit rRNA coding region of mitochondrial DNA from Podospora
 RT anserina.";
 RL J. MOL. EVOL. 28:232-241(1989).
 RN [6]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 86037239.

RA CUMMINGS D.J., MACNEIL I.A., DOMENICO J., MATSUURA E.T.;
 RT "Excision-amplification of mitochondrial DNA during senescence in
 RT Podospora anserina. DNA sequence analysis of three unique
 RT "plasmids";
 RL J. MOL. BIOL. 185:659-680(1985).
 RN [7]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 90124723.
 RA CUMMINGS D.J., MICHEL F., MCNALLY K.L.;
 RT "DNA sequence analysis of the apocytochrome b gene of Podospora
 RT anserina: a new family of intronic open reading frame.";
 RL CURR. GENET. 16:407-418(1989).
 RN [8]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 90124722.
 RA CUMMINGS D.J., MICHEL F., MCNALLY K.L.;
 RT "DNA sequence analysis of the 24.5 kilobase pair cytochrome oxidase
 RT subunit I mitochondrial gene from Podospora anserina: a gene with
 RT sixteen introns.";
 RL CURR. GENET. 16:381-406(1989).
 RN [9]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 90204556.
 RA CUMMINGS D.J., MICHEL F., DOMENICO J.M., MCNALLY K.L.;
 RT "DNA sequence analysis of the mitochondrial ND4L-ND5 gene complex
 RT from Podospora anserina. Duplication of the ND4L gene within its
 RT intron.";
 RL J. MOL. BIOL. 212:269-286(1990).
 RN [10]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 90204556.
 RA CUMMINGS D.J., MICHEL F., DOMENICO J.M., MCNALLY K.L.;
 RT "Mitochondrial DNA sequence analysis of the cytochrome oxidase
 RT subunit II gene from Podospora anserina. A group IA intron with a
 RT putative alternative splice site.";
 RL J. MOL. BIOL. 212:287-294(1990).
 RN [11]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 90291512.
 RA CUMMINGS D.J., MCNALLY K.L., DOMENICO J.M., MATSUURA E.T.;
 RT "The complete DNA sequence of the mitochondrial genome of Podospora
 RT anserina.";
 RL CURR. GENET. 17:375-402(1990).
 DR EMBL; X55026; G578922; -;
 KW MITOCHONDRION.
 SO SEQUENCE 129 AA; 14664 MW; 6E193901 CRC32;

Query Match 60.8%; Score 62; DB 8; Length 129;
 Best Local Similarity 70.0%; Pred. No. 4.61e-01;
 Matches 7; Conservative 1; Mismatches 2; Indels 0; Gaps 0;
 Db 55 VPISPKLRWI 64
 |||||
 QY 2 VCIDPKLW 11
 |||||
 RESULT 12
 ID Q67634 PRELIMINARY; PRT; 203 AA.
 AC Q67634;
 DT 01-NOV-1996 (TREMELREL. 01, CREATED)
 DT 01-NOV-1996 (TREMELREL. 01, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMELREL. 08, LAST ANNOTATION UPDATE)
 DE ECO Q PROTEIN (FRAGMENT).
 OS GALLIUS HERPESVIRUS TYPE 1.
 OC VIRUSES; DSDNA VIRUSES, NO RNA STAGE; HERPESVIRIDAE;
 OC ALPHAHERPESVIRINAE; VARICELLOVIRUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX STRAIN=GA;
 RX MEDLINE; 96074534.
 RA PENG Q., ZENG M., BHUIYAN Z.A., UBUKATA E., TANAKA A., NONOYAMA M.,
 RA SHIRAZI Y.;
 RT "Isolation and characterization of Marek's disease virus (MDV) cDNAs

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RT mapping to the BamHI-12, BamHI-Q2, and BamHI-L fragments of the MDV genome from lymphoblastoid cells transformed and persistently infected with MDV.
 RL VIROLOGY 213:590-599(1995).
 DR EMBL: U34966; G1185444; -.
 DR PFAM: PF00048; 118; 1.
 FT NON_TER 1
 SQ SEQUENCE 203 AA; 23132 MW; 887D04C3 CRC32;

Query Match 60.8%; Score 62; DB 14; Length 203;
 Best Local Similarity 54.5%; Pred. No. 4.61e-01;
 Matches 6; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Db 145 VCVDPKAPWQ 155
 QY 2 VCIDPKLKW 12

RESULT 13
 ID 089093 PRELIMINARY; PRT; 97 AA.
 AC 089093;
 DT 01-NOV-1998 (TREMBLREL. 08, CREATED)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE CC CHEMOKINE ST38 PRECURSOR.
 GN LARC.
 OS MUS MUSCULUS (MOUSE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
 OC SCUROGNATHI; MURIDAE; MURINAE; MUS.
 [1]
 RN SEQUENCE FROM N.A.
 RA UTANS-SCHNEITZ U., LOREZ H., KLINKERT W.E.F., DA SILVA J.,
 RA LESSLAUER W.;
 RT "A novel rat CC chemokine, identified by targeted differential display, is upregulated in brain inflammation."
 RL J. NEUROIMMUNOL. 0:0-0(1998).
 [2]
 RN SEQUENCE FROM N.A.
 RA VILLARES R.;
 RL SUBMITTED (JUL-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL: AF053313; G3551819; -.
 DR EMBL: AJ007862; E1312757; -.
 KW SIGNAL. 1 27 POTENTIAL.
 FT CHAIN 28 97 CC CHEMOKINE ST38.
 SQ SEQUENCE 97 AA; 10826 MW; 053405BD CRC32;

Query Match 59.8%; Score 61; DB 11; Length 97;
 Best Local Similarity 60.0%; Pred. No. 7.30e-01;
 Matches 6; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 74 VCAPDQKQWV 83
 QY 2 VCIDPKLKW 11

RESULT 14
 ID 066640 PRELIMINARY; PRT; 478 AA.
 AC 066640;
 DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
 DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
 DT 01-AUG-1998 (TREMBLREL. 07, LAST ANNOTATION UPDATE)
 DE CHROMOSOME IV COSMID 9740.
 GN D9740.16.
 OS SACCHAROMYCES CEREVISIAE (BAKER'S YEAST).
 OC EUKARYOTA; FUNGI; ASCOMYCOTA; HEMIASCOMYCETES; SACCHAROMYCETALES;
 OC SACCHAROMYCETACEAE; SACCHAROMYCES.
 [1]
 RN SEQUENCE FROM N.A.
 RA JOHNSTON M., ANDREWS S., BRINKMAN R., COOPER J., DING H., DU Z.,
 RA FAYELLO A., FULTON L., GATTUNG S., GRECO T., KIRSTEN J., KUCABA T.,
 RA HALLSWORTH K., HAWKINS J., HILLIER L., JIER M., JOHNSON D.,
 RA JOHNSTON L., LANGSTON Y., LATREILLE P., LE T., NARDIS E., MENEZES S.,

RA MILLER N., NHAN M., PAULEY A., PELUSO D., RIFKEN L., RILES L.,
 RA TALCH A., TREVASKIS E., VIGNATI D., WILCOX L., WOHLDMAN P., VAUDIN M.,
 RA WILSON R., WATERSTON R.;
 RL SUBMITTED (JUN-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
 [2]
 RN SEQUENCE FROM N.A.
 RA DING H.;
 RL SUBMITTED (JUN-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
 [3]
 RN SEQUENCE FROM N.A.
 RA WATERSTON R.;
 RL SUBMITTED (JUN-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
 [4]
 RN SEQUENCE FROM N.A.
 RA JIA Y., CHERRY J.M.;
 RL SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL: U28374; G849223; -.
 SQ SEQUENCE 478 AA; 54436 MW; 380C8ED7 CRC32;

Query Match 58.8%; Score 60; DB 3; Length 478;
 Best Local Similarity 55.6%; Pred. No. 1.15e+00;
 Matches 5; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 445 ICVSPKLGW 453
 QY 2 VCIDPKLKW 10

RESULT 15
 ID 00626 PRELIMINARY; PRT; 93 AA.
 AC 00626;
 DT 01-JUL-1997 (TREMBLREL. 04, CREATED)
 DT 01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE MACROPHAGE-DERIVED CHEMOKINE PRECURSOR.
 GN MDC OR A-152E5.1.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
 OC CATARRHINI; HOMINIDAE; HOMO.
 [1]
 RN SEQUENCE FROM N.A.
 RA GODISKA R., CHANTRY D., RAPORT C.J., SOZZANI S., ALLAVENA P.,
 RA MANTOVANI A., GRAY P.W.;
 RL J. EXP. MED. 185:0-0(0).
 [2]
 RN SEQUENCE FROM N.A.
 RA CHANG M.S., MCINCH J., ELIAS III C., MANTHEY C.L., GROSSHANS D.,
 RA MENG T., BOONE T., ANDREW D.P.;
 RL SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 [3]
 RN SEQUENCE FROM N.A.
 RA ADAMS M.D., LOFTUS B.J., ZHOU L., CROSBY M., FUHRMANN J., MASON T.M.,
 RA BRANDON R., KIM U.J., KERLAVAGE A.R., VENTER J.C.;
 RT "Homo sapiens Chromosome 16 BAC clone CIT987SK-A-152E5.";
 RL SUBMITTED (JUN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL: U83171; G1931581; -.
 DR EMBL: U83239; G2062425; -.
 DR EMBL: AC004382; G3252820; -.
 DR PFAM: PF00048; 118; 1.
 KW SIGNAL. 1 24 POTENTIAL.
 FT CHAIN 25 93 MACROPHAGE-DERIVED CHEMOKINE.
 SQ SEQUENCE 93 AA; 10580 MW; 65EA63D2 CRC32;

Query Match 57.8%; Score 59; DB 4; Length 93;
 Best Local Similarity 36.4%; Pred. No. 1.81e-00;
 Matches 4; Conservative 5; Mismatches 2; Indels 0; Gaps 0;

Db 74 EICADPRPVW 84
 QY 1 QVCIDPKLKW 11

Sat Feb 5 15:14:41 2000

Search completed: Fri Feb 4 17:05:18 2000
Job time : 56 secs.

US-09-150-813-38.rspt

M P E R L A
(TM)

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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm
Run on: Fri Feb 4 17:10:08 2000; MasPar time 5.11 Seconds
128.223 Million cell updates/sec
Tabular output not generated.

Title: >US-09-150-813-40
Description: (1-12) from US09150813.pep
Perfect Score: 99
Sequence: 1 ELCLDPKENWVQ 12

Scoring table: PAM 150
Gap 15

Searched: 179066 seqs, 54579741 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: sptrembl9
1:sp-archaea 2:sp-bacteria 3:sp-fungi 4:sp-human
5:sp-invertebrate 6:sp-mammal 7:sp-mhc 8:sp-organelle
9:sp-phage 10:sp-plant 11:sp-rodent 12:sp_unclassified
13:sp-vertebrate 14:sp-virus

Statistics: Mean 25.761; Variance 34.141; scale 0.755

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description	Pred. No.
1	78	78.8	134	4	BETA CHEMOKINE EXODUS-	1.31e-04
2	72	72.7	133	11	BETA CHEMOKINE EXODUS	2.88e-03
3	72	72.7	133	11	SMALL INDUCIBLE CYTOKI	2.88e-03
4	71	71.7	395	11	FRACTALKINE.	4.77e-03
5	71	71.7	395	11	NEUROTACTIN.	4.77e-03
6	69	69.7	97	6	INTERLEUKIN-8 (FRAGMEN	1.29e-02
7	69	69.7	120	4	IL-10-INDUCIBLE CHEMOK	1.29e-02
8	68	68.7	119	4	MP1F-2.	2.11e-02
9	66	66.7	80	4	LD78 ALPHA BETA PRECUR	5.60e-02
10	65	65.7	97	11	CC CHEMOKINE ST38 PREC	9.07e-02
11	65	65.7	104	13	K60 PROTEIN PRECURSOR.	2.34e-01
12	63	63.6	397	4	CX3C CHEMOKINE PRECURS	2.34e-01
13	63	63.6	455	10	1-AMINOCYCLOPROPANE-1-	2.34e-01
14	63	63.6	477	10	1-AMINOCYCLOPROPANE 1-	3.75e-01
15	62	62.6	158	10	PUTATIVE DISEASE RESIS	5.96e-01
16	61	61.6	176	11	CONSERVED HYPOTHETICAL	9.44e-01
17	60	60.6	92	11	CC CHEMOKINE ABCD-1.	9.44e-01
18	60	60.6	101	13	LFCA-1 PROTEIN PRECURS	9.44e-01
19	60	60.6	109	4	CXC CHEMOKINE PRECURSO	1.49e+00
20	59	59.6	97	13	LYMPHOTACTIN PRECURSOR	1.49e+00

21	59	59.6	535	4	Q15830	1.49e+00
22	59	59.6	862	4	O99665	1.49e+00
23	58	58.6	95	14	O98158	2.34e+00
24	58	58.6	109	11	O55038	2.34e+00
25	58	58.6	203	14	O67634	2.34e+00
26	58	58.6	522	5	O61090	2.34e+00
27	58	58.6	1142	4	Q14324	2.34e+00
28	57	57.6	95	4	O99664	3.65e+00
29	57	57.6	96	11	P97884	3.65e+00
30	57	57.6	365	10	Q42917	3.65e+00
31	57	57.6	1777	14	O89278	3.65e+00
32	57	57.6	2919	14	O85431	3.65e+00
33	56	56.6	68	10	Q41694	5.66e+00
34	56	56.6	93	4	O00626	5.66e+00
35	56	56.6	148	14	Q82745	5.66e+00
36	56	56.6	210	2	O69755	5.66e+00
37	56	56.6	490	10	Q43813	5.66e+00
38	56	56.6	719	10	O23317	5.66e+00
39	56	56.6	745	4	O14666	5.66e+00
40	56	56.6	889	10	O22728	5.66e+00
41	56	56.6	925	10	O64789	5.66e+00
42	56	56.6	1089	5	Q26155	5.66e+00
43	56	56.6	1130	14	Q88282	5.66e+00
44	56	56.6	1716	4	O14528	5.66e+00
45	56	56.6				

ALIGNMENTS

RESULT 1
ID O00585 PRELIMINARY; PRT; 134 AA.
AC O00585;
DT 01-JUL-1997 (TREMUREL. 04, CREATED)
DT 01-JUL-1997 (TREMUREL. 04, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMUREL. 08, LAST ANNOTATION UPDATE)
DE BETA CHEMOKINE EXODUS-2.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RA HROMAS R.A., GRAY P., KLEMSZ M., FIFE K., BROXMEYER H.;
RL SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE; 97400322.
RA HEDRICK J.A., ZLOTNIK A.;
RT "Identification and characterization of a novel beta chemokine
containing six conserved cysteines."
RL J. IMMUNOL. 159:1589-1593(1997).
RN [3]
RP SEQUENCE FROM N.A.
RA HEDRICK J.A., ZLOTNIK A.;
RL SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [4]
RP SEQUENCE FROM N.A.
RA NAGIRA M., IMAI T., HIESHIMA K., KUSUDA J., RIDANPAA M., TAKAGI S.,
NISHIMURA M., KAKIZAKI M., NOMIYAMA H., YOSHIE O.;
RL SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; U88320; G2196920; -
DR EMBL; AF001979; G2624925; -
DR EMBL; AB002409; D1022673; -
DR PFAM; PF00048; 118; 1.
SQ SEQUENCE 134 AA; 14646 MW; FE86A239 CRC32;

Query Match 78.8%; Score 78; DB 4; Length 134;
Best Local Similarity 83.3%; Pred. No. 1.31e-04;
Matches 10; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Db 73 ELCLDPKENWVQ 84

QY 1 ELCLDPKENWVQ 12

SEQUENCE FROM N.A.
RC STRAIN-BALB/C; TISSUE=BRAIN;
RA ROSSI D., HARDIMAN G., COPELAND N., GILBERT D.J., JENKINS N.,
R ZLOTNIK A., BAZAN J.F.;
R SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; U92565; G2459677; -.
DD PFAM; PF00048; i18; 1.
SQ SEQUENCE 395 AA; 42040 MW; 3997A113 CFC39.

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Query Match          71.7%;      Score 71;   DB 11;   Length 395;
Best Local Similarity 72.7%;      Pred. No. 4,77e-03;
Matches 8;   Conservative 2;   Mismatches 1;   Indels 0;   Gaps 0;

9      73 FCADPKEKNWQ 83
      :| |||||
2  LCLDPKENWVQ 12

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Sat Feb 5 15:13:52 2000

Query Match 69.7%; Score 69; DB 4; Length 120;
 Best Local Similarity 50.0%; Pred. No. 1.29e-02;
 Matches 6; Conservative 5; Mismatches 1; Indels 0; Gaps 0;

Db 74 EVCNPNDDWVQ 85
 QY 1 ELCLOPKENWVQ 12

RESULT 8
 ID O00175 PRELIMINARY; PRT: 119 AA.
 AC O00175;
 DT 01-JUL-1997 (TREMELREL. 04, CREATED)
 DT 01-JUL-1997 (TREMELREL. 04, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMELREL. 08, LAST ANNOTATION UPDATE)
 DE MP1F-2.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
 OC CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RA PATEL V.P., KREIDER B.L., LI Y., LI H., LEUNG K., SALCEDO T.,
 RA NARDELLI B., PIPPELLA V., GENTZ S., THOTAKURA R., PARMELEE D.,
 RA GENTZ R., GAROTTA G.;
 RL J. EXP. MED. 0:0-0(0).
 DR EMBL; U85768; G1916252; -.
 DR PFAM; PF00048; i18; 1.
 SQ SEQUENCE 119 AA; 13119 MW; CDF526F0 CRC32;

Query Match 68.7%; Score 68; DB 4; Length 119;
 Best Local Similarity 58.3%; Pred. No. 2.11e-02;
 Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 72 QFCGDPKQEWVQ 83
 QY 1 ELCLOPKENWVQ 12

RESULT 9
 ID Q14745 PRELIMINARY; PRT: 80 AA.
 AC Q14745;
 DT 01-NOV-1996 (TREMELREL. 01, CREATED)
 DT 01-NOV-1996 (TREMELREL. 01, LAST SEQUENCE UPDATE)
 DT 01-JAN-1999 (TREMELREL. 09, LAST ANNOTATION UPDATE)
 DE LD78 ALPHA BETA PRECURSOR (FRAGMENT).
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
 OC CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RA TISSUE-BRAIN;
 RA ISHIZUKA K., IGATA-YI R., NARUSE K., NAKASHIMA H., OHUCHI K.,
 RA KATSURAGI S., KIN Y., OHMOTO Y., NOMIYAMA H., IIO M., MIURA R.,
 RA MIYAKAWA T.;
 RA SUBMITTED (AUG-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
 RL EMBL; D63785; D1010501; -.
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 KW SIGNAL.
 FT NON_TER 1 1
 FT SIGNAL <1 16 POTENTIAL.
 FT CHAIN 17 >80 LD78 ALPHA BETA.
 FT NON_TER 80 80
 SQ SEQUENCE 80 AA; 8857 MW; 3F87F1C6 CRC32;

Query Match 66.7%; Score 66; DB 4; Length 80;
 Best Local Similarity 58.3%; Pred. No. 5.60e-02;
 Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 65 QVCADPSEWVQ 76
 QY 1 ELCLOPKENWVQ 12

RESULT 6
 ID O62812 PRELIMINARY; PRT: 97 AA.
 AC O62812;
 DT 01-AUG-1998 (TREMELREL. 07, CREATED)
 DT 01-AUG-1998 (TREMELREL. 07, LAST SEQUENCE UPDATE)
 DT 01-AUG-1998 (TREMELREL. 07, LAST ANNOTATION UPDATE)
 DE INTERLEUKIN-8 (FRAGMENT).
 GN IL-8.
 OS EQUUS CABALLUS (HORSE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC PERISSODACTILA; EQUIDAE; EQUUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RA FRANCHINI M.;
 RA SUBMITTED (APR-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
 RL EMBL; AF062377; G3126973; -.
 DR NON_TER 97 97
 FT SEQUENCE 97 AA; 10742 MW; 00396FBF CRC32;

Query Match 69.7%; Score 69; DB 6; Length 97;
 Best Local Similarity 58.3%; Pred. No. 1.29e-02;
 Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 75 EVCINPHTKWQ 86
 QY 1 ELCLOPKENWVQ 12

RESULT 7
 ID O15467 PRELIMINARY; PRT: 120 AA.
 AC O15467;
 DT 01-JAN-1998 (TREMELREL. 05, CREATED)
 DT 01-JAN-1998 (TREMELREL. 05, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMELREL. 08, LAST ANNOTATION UPDATE)
 DE IL-10-INDUCIBLE CHEMOKINE.
 GN IL10 OR SCYAL6.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
 OC CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RA HEDRICK J.A., HELMS A., GORMAN D., ZLOTNIK A.;
 RA SUBMITTED (NOV-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [2]
 RP SEQUENCE FROM N.A.
 RA TISSUE-LIVER;
 RA SHODAI K., HIESHIMA K., FUKUDA S., IIO M., MIURA R., IMAI T.,
 RA YOSHIE O., NOMIYAMA H.;
 RA BIOCHIM. BIOPHYS. ACTA 0:0-0(1998).
 RN [3]
 RP SEQUENCE FROM N.A.
 RA NOMIYAMA H.;
 RT "Structure of a region of 181 kb containing five CC chemokine
 genes";
 RT SUBMITTED (AUG-1998) TO EMBL/GENBANK/DBJ DATA BANKS.

RESULT 4
 ID O15467 PRELIMINARY; PRT: 120 AA.
 AC O15467;
 DT 01-JAN-1998 (TREMELREL. 05, CREATED)
 DT 01-JAN-1998 (TREMELREL. 05, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMELREL. 08, LAST ANNOTATION UPDATE)
 DE IL-10-INDUCIBLE CHEMOKINE.
 GN IL10 OR SCYAL6.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
 OC CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RA HEDRICK J.A., HELMS A., GORMAN D., ZLOTNIK A.;
 RA SUBMITTED (NOV-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [2]
 RP SEQUENCE FROM N.A.
 RA TISSUE-LIVER;
 RA SHODAI K., HIESHIMA K., FUKUDA S., IIO M., MIURA R., IMAI T.,
 RA YOSHIE O., NOMIYAMA H.;
 RA BIOCHIM. BIOPHYS. ACTA 0:0-0(1998).
 RN [3]
 RP SEQUENCE FROM N.A.
 RA NOMIYAMA H.;
 RT "Structure of a region of 181 kb containing five CC chemokine
 genes";
 RT SUBMITTED (AUG-1998) TO EMBL/GENBANK/DBJ DATA BANKS.

Query Match 66.7%; Score 66; DB 4; Length 80;
 Best Local Similarity 58.3%; Pred. No. 5.60e-02;
 Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 65 QVCADPSEWVQ 76
 QY 1 ELCLOPKENWVQ 12

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RESULT 10
ID O89093 PRELIMINARY; PRT; 97 AA.
AC O89093;
DT 01-NOV-1998 (TREMREL. 08, CREATED)
DT 01-NOV-1998 (TREMREL. 08, LAST SEQUENCE UPDATE)
DE 01-NOV-1998 (TREMREL. 08, LAST SEQUENCE UPDATE)
DE CC CHEMOKINE ST38 PRECURSOR.
GN LARC.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RP SEQUENCE FROM N.A.
RA UTANS-SCHNEITZ U., LOREZ H., KLINKERT W.E.F., DA SILVA J.,
RA LESSLAUER W.;
RT "A novel rat CC chemokine, identified by targeted differential
RT display, is upregulated in brain inflammation.";
RN J. NEUROIMMUNOL. 0:0-0(1998).
RN [2]
RP SEQUENCE FROM N.A.
RA VILLARES R.;
RA SUBMITTED (JUL-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; AF053313; G3551819; -.
DR EMBL; AJ007862; E1312757; -.
KW SIGNAL.
FT CHAIN 1 27 POTENTIAL.
FT CHAIN 28 97 CC CHEMOKINE ST38.
SQ SEQUENCE 97 AA; 10826 MW; 053405BD CRC32;

Query Match 65.7%; Score 65; DB 11; Length 97;
Best Local Similarity 70.0%; Pred. No. 9.07e-02;
Matches 7; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 74 VCADPKQNV 83
QY 2 LCCLDPKENV 11
:|:|||||

RESULT 11
ID O73912 PRELIMINARY; PRT; 104 AA.
AC O73912;
DT 01-AUG-1998 (TREMREL. 07, CREATED)
DT 01-AUG-1998 (TREMREL. 07, LAST SEQUENCE UPDATE)
DE 01-AUG-1998 (TREMREL. 07, LAST SEQUENCE UPDATE)
DE K60 PROTEIN PRECURSOR.
GN K60.
OS GALLUS GALLUS (CHICKEN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; ARCHOSAURIA; AVES;
OC NEOGNATHAE; GALLIFORMES; PHASIANIDAE; PHASIANINAE; GALLUS.
RN [1]
RP SEQUENCE FROM N.A.
RA TISSUE-MACROPHAGE LIKE;
RA SICK C.;
RL SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; Y14971; E1295103; -.
KW SIGNAL.
FT CHAIN 1 20 POTENTIAL.
FT CHAIN 21 104 K60 PROTEIN.
SQ SEQUENCE 104 AA; 11199 MW; 40C2EF8A CRC32;

Query Match 65.7%; Score 65; DB 13; Length 104;
Best Local Similarity 63.6%; Pred. No. 9.07e-02;
Matches 7; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Db 75 EVCCLDPTAPKV 85
QY 1 EICCLDPKENV 11
:|:|||||

RESULT 12
ID P78423 PRELIMINARY; PRT; 397 AA.
AC P78423; O00672;

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DT 01-MAY-1997 (TREMREL. 03, CREATED)
DT 01-MAY-1997 (TREMREL. 03, LAST SEQUENCE UPDATE)
DE 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
DE CX3C CHEMOKINE PRECURSOR.
GN A-152E5.2.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RA MEDLINE; 9717711.
RA BAZAN J.F., BACON K.B., HARDIMAN G., WANG W., SOO K., ROSSI D.,
RA GRAVES D.R., ZLOTNIK A., SCHALL T.J.;
RT "A new class of membrane-bound chemokine with a CX3C motif.";
RN NATURE 385:640-644(1997).
RN [2]
RP SEQUENCE FROM N.A.
RA ADAMS M.D., LOFTUS B.J., ZHOU L., CROSBY M., FUHRMANN J., MASON T.M.,
RA BRANDON R., KIM U.J., KERLAVAGE A.R., VENTER J.C.;
RT "Homo sapiens Chromosome 16 BAC clone CIT987SK-A-152E5.";
RN SUBMITTED (JUN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; U91835; G1899259; -.
DR EMBL; U8487; G1888523; -.
DR EMBL; AC004382; G3252821; -.
DR PFAM; PF00048; 118; 1.
KW SIGNAL.
FT CHAIN 1 24 POTENTIAL.
FT CHAIN 25 397 CX3C CHEMOKINE.
SQ SEQUENCE 397 AA; 42202 MW; C8093D7D CRC32;

Query Match 63.6%; Score 63; DB 4; Length 397;
Best Local Similarity 70.0%; Pred. No. 2.34e-01;
Matches 7; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Db 73 FCADPKQNV 82
QY 2 LCCLDPKENV 11
:|:|||||

RESULT 13
ID O43168 PRELIMINARY; PRT; 455 AA.
AC O43168;
DT 01-NOV-1996 (TREMREL. 01, CREATED)
DT 01-NOV-1996 (TREMREL. 01, LAST SEQUENCE UPDATE)
DE 01-JAN-1999 (TREMREL. 09, LAST ANNOTATION UPDATE)
DE 1-AMINOCYCLOPROPANE-1-CARBOXYLATE SYNTHASE (EC 4.4.1.14)
DE (ACC SYNTHASE) (FRAGMENT).
OS SOLANUM TUBEROSUM (POTATO).
OC EUKARYOTA; VIRIDIPANTAE; STREPTOPHYTA; EMBRYOPHYTA; TRACHEOPHYTA;
OC EUPHYLLIPHYTES; SPERMATOPHYTA; MAGNOLIOPHYTA; EUDICOTYLEDONS;
OC ASTERIDAE; SOLANACEAE; SOLANACEAE; SOLANACEAE; SOLANUM.
RN [1]
RP SEQUENCE FROM N.A.
RA STRAIN-NORLAND; TISSUE=LEAVES;
RX MEDLINE; 95306794.
RA SCHLAGNAUFER C.D., GLICK R.E., ARTECA R.N., PELL E.J.;
RT "Expression of the CMS-associated urfs sequence in transgenic petunia
RT and tobacco.";
RN PLANT MOL. BIOL. 28:83-92(1995).
CC -!- CATALYTIC ACTIVITY: S-ADENOSYL-L-METHIONINE -
CC 1-AMINOCYCLOPROPANE-1-CARBOXYLATE + METHYLTHIOADENOSINE.
CC -!- COFACTOR: PYRIDOXAL-PHOSPHATE.
CC -!- COFACTOR: PYRIDOXAL-PHOSPHATE.
CC -!- SIMILARITY: BELONGS TO CLASS-I OF PYRIDOXAL-PHOSPHATE-DEPENDENT
CC AMINOTRANSFERASES.
DR EMBL; L20634; G927207; -.
DR PROSITE; PS00105; AA_TRANSFER_CLASS_1; 1.
DR PFAM; PF00155; aminotran_1; 1.
DR MENDEL; 10716; Soltu; ACS; 4.
KW LYASE; PYRIDOXAL PHOSPHATE.
FT NON_TER 1
SQ SEQUENCE 455 AA; 51509 MW; 2C65C534 CRC32;

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US-09-150-813-40.rspt

Sat Feb 5 15:13:52 2000

Query Match 63.6%; Score 63; DB 10; Length 455;
 Best Local Similarity 54.5%; Pred. No. 2.34e-01;
 Matches 6; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 26 QICLDLIEDWI 36
 :|||||:|:|:
 QY 1 ELCLDPKENWV 11

RESULT 14
 ID P34005 PRELIMINARY; PRT; 477 AA.
 AC 01-MAY-1997 (TREMBREL. 03, LAST SEQUENCE UPDATE)
 DT 01-MAY-1997 (TREMBREL. 03, LAST SEQUENCE UPDATE)
 DT 01-JAN-1999 (TREMBREL. 09, LAST ANNOTATION UPDATE)
 DE 1-AMINOCYCLOPROPANE 1-CARBOXYLATE SYNTHASE (EC 4.4.1.14)
 DE (1-AMINOCYCLOPROPANE-1-CARBOXYLATE SYNTHASE) (ACC SYNTHASE)
 DE (FRAGMENT).
 OS LYCOPERSICON ESCULENTUM (TOMATO).
 OC EUKARYOTA; VIRIDIPANTAE; STREPTOPHYTA; EMBRYOPHYTA; TRACHEOPHYTA;
 OC EUPHYLLOPHYTES; SPERMATOPHYTA; MAGNOLIOPHYTA; EUDICOTYLEDONS;
 OC ASTERIDAE; SOLANACEAE; SOLANACEAE; SOLANACEAE; SOLANUM.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=CV. PIKRED; TISSUE=PERICARP;
 RX MEDLINE: 94165094.
 RA LI N., WIESMAN Z., LIU D., MATTOO A.K.;
 RT "Deletion of the carboxyl-terminal region of
 1-aminocyclopropane-1-carboxylic acid synthase, a key protein in the
 biosynthesis of ethylene, results in catalytically hyperactive,
 monomeric enzyme."
 RT J. BIOL. CHEM. 269:6908-6917(1994).
 RN [2]
 RP SEQUENCE OF 207-295 FROM N.A.
 RC TISSUE=PERICARP;
 RX MEDLINE: 92196141.
 RA YIP W.K., MOORE T., YANG S.F.;
 RT "Differential accumulation of transcripts for four tomato
 1-aminocyclopropane-1-carboxylate synthase homologs under various
 conditions."
 RT PROC. NATL. ACAD. SCI. U.S.A. 89:2475-2479(1992).
 RL -1- CATALYTIC ACTIVITY: S-ADENOSYL-L-METHIONINE =
 1-AMINOCYCLOPROPANE-1-CARBOXYLATE + METHYLTHIOADENOSINE.
 CC -1- COFACTOR: PYRIDOXAL-PHOSPHATE.
 CC -1- COFACTOR: PYRIDOXAL-PHOSPHATE (BY SIMILARITY).
 CC -1- SIMILARITY: BELONGS TO CLASS-1 OF PYRIDOXAL-PHOSPHATE-DEPENDENT
 AMINOTRANSFERASES.
 CC EMBL: X62536; G19164; .
 DR EMBL: M83318; G867990; .
 DR PROSITE: PS00105; AA_TRANSFER_CLASS_1; 1.
 DR PFAM: PF00155; aminotran_1; 1
 DR MENDEL: 15548; LycEs; acc:mn15548.
 KW LYASE; PYRIDOXAL PHOSPHATE.
 FT NON_TER 1
 FT SEQUENCE 477 AA; 53784 MW; 6997FD75 CRC32;

Query Match 63.6%; Score 63; DB 10; Length 477;
 Best Local Similarity 54.5%; Pred. No. 2.34e-01;
 Matches 6; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 49 QICLDLIEDWI 59
 :|||||:|:|:
 QY 1 ELCLDPKENWV 11

RESULT 15
 ID O64975 PRELIMINARY; PRT; 158 AA.
 AC O64975;
 DT 01-AUG-1998 (TREMBREL. 07, CREATED)
 DT 01-AUG-1998 (TREMBREL. 07, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBREL. 08, LAST ANNOTATION UPDATE)
 DE PUTATIVE DISEASE RESISTANCE PROTEIN (FRAGMENT).
 OS ARABIDOPSIS THALIANA (MOUSE-EAR CRESS).

Query Match 62.6%; Score 62; DB 10; Length 158;
 Best Local Similarity 62.5%; Pred. No. 3.75e-01;
 Matches 5; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 121 CLDPREAW 128
 :|:|:|:|:
 QY 3 CLDPKENW 10

Search completed: Fri Feb 4 17:11:03 2000
 Job time : 55 secs.

Search completed: Fri Feb 4 17:11:03 2000
 Job time : 55 secs.

 M P S R C H
 (TM)

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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 17:16:30 2000; MasPar time 5.03 Seconds
 130.268 Million cell updates/sec

Tabular output not generated.

Title: >US-09-150-813-41
 Description: (1-12) from US09150813.pep
 Perfect Score: 92
 Sequence: 1 EICLDPEAPFLK 12

Scoring table: PAM 150
 Gap 15

Searched: 179066 seqs, 54579741 residues

Post-processing: Minimum Match 0%
 Listing first 45 summaries

Database: sptrembl9
 1:sp-archaea 2:sp-bacteria 3:sp-fungi 4:sp-human
 5:sp-invertebrate 6:sp-mammal 7:sp-mhc 8:sp-ordanelle
 9:sp-phage 10:sp-plant 11:sp-rodent 12:sp-unclassified
 13:sp-vertebrate 14:sp-virus

Statistics: Mean 24.746; Variance 30.425; scale 0.813

pred. No. is the number of results predicted by chance to have a
 score greater than or equal to the score of the result being printed,
 and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Query Match	Length	ID	Description	Pred. No.
1	64	69.6	101 13	LFCA-1 PROTEIN PRECURS.	2.63e-02
2	64	69.6	104 13	K60 PROTEIN PRECURSOR.	2.63e-02
3	63	68.5	59 6	MELANOMA GROWTH STIMUL	4.42e-02
4	62	67.4	103 6	GRO.	7.41e-02
5	62	67.4	427 2	HYPOTHETICAL 48.6 KD P	7.41e-02
6	58	63.0	314 2	PUTATIVE ADP-L-GLYCERO	5.57e-01
7	58	63.0	314 2	ORF22-1 PROTEIN.	5.57e-01
8	57	62.0	225 2	DNA FOR OTN REGION GEN	5.57e-01
9	57	62.0	1198 3	HYPOTHETICAL 25.8 KD P	9.11e-01
10	56	60.9	66 6	SIMILARITY TO UDP-GLUC	9.11e-01
11	56	60.9	119 6	PERMEABILITY FACTOR 2	1.48e+00
12	56	60.9	212 10	TYPE IIA PROCOLLAGEN (1.48e+00
13	56	60.9	218 10	SELF-INCOMPATIBILITY G	1.48e+00
14	56	60.9	40245	SELF-INCOMPATIBILITY G	1.48e+00
15	56	60.9	458 13	DOFAMINE D1B RECEPTOR.	1.48e+00
16	56	60.9	470 3	HYPOTHETICAL 54.3 KD P	1.48e+00
17	56	60.9	1442 11	PRO-ALPHA-1 TYPE II CO	1.48e+00
18	56	60.9	1442 11	PRO-ALPHA-1 TYPE II CO	1.48e+00
19	56	60.9	1459 11	PRO-ALPHA-1 TYPE II CO	1.48e+00
20	55	59.8	236 14	DNA FOR ORF61 AND ORF6	2.39e+00

21 55 59.8 344 14 011293 HYPOTHETICAL 38.8 KD P 2.39e+00
 22 55 59.8 362 10 081811 PUTATIVE PHYTOCHELATIN 2.39e+00
 23 55 59.8 463 11 064282 INTERFERON INDUCIBLE P 2.39e+00
 24 55 59.8 772 14 098211 MCO43L. 3.85e+00
 25 54 58.7 220 4 075435 CHROMODOMAIN-HELICASE- 3.85e+00
 26 54 58.7 282 2 032497 VRLR 6.15e+00
 27 53 57.6 103 4 099227 COLLAGEN ALPHA 1(II) C 6.15e+00
 28 53 57.6 126 6 002797 TYPE II COLLAGEN (FRAG 6.15e+00
 29 53 57.6 131 6 018871 COLLAGEN TYPE IIA (FRA 6.15e+00
 30 53 57.6 258 2 052292 ORF10. 6.15e+00
 31 53 57.6 282 10 048628 PYROPHOSPHATE-DEPENDEN 6.15e+00
 32 53 57.6 288 10 096463 MYB4 TRANSCRIPTION FAC 6.15e+00
 33 53 57.6 465 14 090729 ORF L2. 6.15e+00
 34 53 57.6 580 5 P90696 5'-NUCLEOTIDASE (FRAGM 6.15e+00
 35 53 57.6 716 10 065717 PUTATIVE CYCLIC NUCLEO 6.15e+00
 36 53 57.6 1036 5 094071 T21H8.1. 6.15e+00
 37 53 57.6 1051 5 026055 2-ALPHA COLLAGEN (COLL 6.15e+00
 38 53 57.6 1174 5 026240 NITRIC OXIDE SYNTHASE. 6.15e+00
 39 53 57.6 1278 4 015118 NIEMANN-PICK C DISEASE 6.15e+00
 40 53 57.6 1487 4 014047 ALPHA-1 TYPE II COLLAG 6.15e+00
 41 53 57.6 1896 10 064604 F1707.14 PROTEIN. 6.15e+00
 42 52 56.5 203 14 067634 ECO Q PROTEIN (FRAGMEN 9.77e+00
 43 52 56.5 327 2 P94875 TRANSCRIPTION FACTOR.. 9.77e+00
 44 52 56.5 509 2 006958 TRAJ. 9.77e+00
 45 52 56.5 585 2 Q56403 ATPASE ALPHA-SUBUNIT (9.77e+00

ALIGNMENTS

RESULT 1 PRELIMINARY; PRT; 101 AA.
 ID O93442;
 AC O93442; (TREMREL. 08, CREATED)
 DT 01-NOV-1998 (TREMREL. 08, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMREL. 08, LAST SEQUENCE UPDATE)
 DE LFCA-1 PROTEIN PRECURSOR.
 OS LAMPETRA FLUVIATILIS (RIVER LAMPREY).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; CEPHALASPIDOMORPHI;
 OC PETROMYZONTIFORMES; PETROMYZONTIDAE; LAMPETRA.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=LEUKOCYTES;
 RA NAJAKSHIN A.M., MECHETINA L.V., ALABYEV B.Y., TARANTIN A.V.;
 RT "Identification of the interleukin 8 homologue in lamprey (Lampetra
 fluviatilis): early evolutionary divergence of chemokines."
 RL SUBMITTED (JUL-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; AJ231072; E1313821;
 KW SIGNAL.
 FT CHAIN 1 22 POTENTIAL.
 FT CHAIN 23 101 LFCA-1 PROTEIN.
 SQ SEQUENCE 101 AA; 11095 MW; E4ALEZOF CRC32;

Query Match 69.6%; Score 64; DB 13; Length 101;
 Best Local Similarity 50.0%; Pred. No. 2.63e-02;
 Matches 6; Conservative 5; Mismatches 1; Indels 0; Gaps 0;

Db 73 QICLNPDAPWVR 84
 ::::|::|::|
 QY 1 EICLDPEAPFLK 12

RESULT 2 PRELIMINARY; PRT; 104 AA.

ID O73912;
 AC O73912; (TREMREL. 07, CREATED)
 DT 01-AUG-1998 (TREMREL. 07, LAST SEQUENCE UPDATE)
 DT 01-AUG-1998 (TREMREL. 07, LAST SEQUENCE UPDATE)
 DE K60 PROTEIN PRECURSOR.
 GN K60.
 OS GALLUS GALLUS (CHICKEN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; ARCHOSAURIA; AVES;
 OC NEOGNATHAE; GALLIFORMES; PHASIANIDAE; GALLUS.
 RN [1]

SEQUENCE

SEQUENCE 314 AA; 35244 MW; A4A1B324 CRC32;
(ORIGINAL).

SEQUENCE 314 AA; 35244 MW; A4A1B324 CRC32;

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DR EMBL; U47542; GI381034; -.
DR EMBL; AB012956; D1034551; -.
SQ SEQUENCE 314 AA; 35184 MW; 285DABD8 CRC32;

Query Match 63.0%; Score 58; DB 2; Length 314;
Best Local Similarity 77.8%; Pred. No. 5.57e-01;
Matches 7; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Db 104 CLDREIPFL 112
   ||| | |||
QY 3 CLDPEAPFL 11

RESULT 7
ID O87143 PRELIMINARY; PRT; 314 AA.
AC O87143;
DT 01-NOV-1998 (TREMBLREL. 08, CREATED)
DT 01-JAN-1999 (TREMBLREL. 09, LAST SEQUENCE UPDATE)
DT 01-JAN-1999 (TREMBLREL. 09, LAST ANNOTATION UPDATE)
DE OTF22-1 PROTEIN.
GN OTF22-1.
OS VIBRIO CHOLERAE.
OC BACTERIA; PROTEOBACTERIA; GAMMA SUBDIVISION; VIBRIONACEAE; VIBRIO.
[1]
RN SEQUENCE FROM N.A.
RP STRAIN-022;
RC YAMASAKI S., SHIMIZU T., HOSHINO K., HO S., SHIMADA T., NAIR G.B.,
RA TAKEDA Y.;
RT "The genes responsible for O-antigen synthesis of Vibrio cholerae
RL O139 are closely related to those of Vibrio cholerae O22."
RL SUBMITTED (APR-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; AB012957; D1037474; -.
SQ SEQUENCE 314 AA; 35197 MW; BEAD8618 CRC32;

Query Match 63.0%; Score 58; DB 2; Length 314;
Best Local Similarity 77.8%; Pred. No. 5.57e-01;
Matches 7; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Db 104 CLDREIPFL 112
   ||| | |||
QY 3 CLDPEAPFL 11

RESULT 8
ID O57098 PRELIMINARY; PRT; 314 AA.
AC O57098;
DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE DNA FOR OTN REGION GENES.
GN READ OR OTF139-1.
OS VIBRIO CHOLERAE.
OC BACTERIA; PROTEOBACTERIA; GAMMA SUBDIVISION; VIBRIONACEAE; VIBRIO.
[1]
RN SEQUENCE FROM N.A.
RP STRAIN-O13G;
RC MEDLINE; 96386047.
RA BIK E.M., BUNSCHOTEN A.E., CHANG A.C.Y., MOOI F.R.;
RT "Genetic organization and functional analysis of the otn DNA
RT essential for cell-wall polysaccharide synthesis in Vibrio cholerae
RT O139."
RT MOL. MICROBIOL. 20:799-811(1996).
[2]
RN SEQUENCE FROM N.A.
RP STRAIN-O139;
RC VIMONT S., DUMONTIER S., ESCUYER V., BERCHE P.;
RA SUBMITTED (FEB-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
[3]
RN SEQUENCE FROM N.A.
RC STRAIN-MO45;
RA YAMASAKI S., SHIMIZU T., HOSHINO K., HO S., SHIMADA T., NAIR G.B.,
RA TAKEDA Y.;
RT "The genes responsible for O-antigen synthesis of Vibrio cholerae
RT O139 are closely related to those of Vibrio cholerae O22."
RL SUBMITTED (APR-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; X90547; E194949; -.

DR EMBL; U47542; GI381034; -.
DR EMBL; AB012956; D1034551; -.
SQ SEQUENCE 314 AA; 35184 MW; 285DABD8 CRC32;

Query Match 63.0%; Score 58; DB 2; Length 314;
Best Local Similarity 77.8%; Pred. No. 5.57e-01;
Matches 7; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Db 104 CLDREIPFL 112
   ||| | |||
QY 3 CLDPEAPFL 11

RESULT 9
ID P73989 PRELIMINARY; PRT; 225 AA.
AC P73989;
DT 01-FEB-1997 (TREMBLREL. 02, CREATED)
DT 01-FEB-1997 (TREMBLREL. 02, LAST SEQUENCE UPDATE)
DT 01-FEB-1999 (TREMBLREL. 09, LAST ANNOTATION UPDATE)
DE HYPOTHETICAL 25.8 KD PROTEIN.
GN SYNECHOCYSTIS SP. (STRAIN PCC 6803).
OS SYNECHOCYSTIS SP. (STRAIN PCC 6803).
OC BACTERIA; CYANOBACTERIA; CHROCOCCALES; SYNECHOCYSTIS.
[1]
RN SEQUENCE FROM N.A.
RP STRAIN-PCC6803;
RC TABATA S.;
RL SUBMITTED (JUN-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
[2]
RN SEQUENCE FROM N.A.
RP STRAIN-PCC6803;
RC MEDLINE; 97061201.
RA KANEKO T., SATO S., KOTANI H., TANAKA A., ASAMIZU E., NAKAMURA Y.,
RA MIYAJIMA N., HIROSAWA M., SUGIURA M., SASAMOTO S., KIMURA T.,
RA HOSOUCHI T., MATSUNO A., MURAKI A., NAKAZAKI N., NARUO K., OKUMURA S.,
RA SHIMPO S., TAKEUCHI C., WADA T., WATANABE A., YAMADA M., YASUDA M.,
RA TABATA S.;
RT "Sequence analysis of the genome of the unicellular cyanobacterium
RT Synechocystis sp. PCC6803. II. Sequence determination of the entire
RT genome and assignment of potential protein-coding regions."
RL DNA RES. 3:109-136(1996).
DR EMBL; D90911; D1018792; -.
KW HYPOTHETICAL PROTEIN.
SQ SEQUENCE 225 AA; 25816 MW; 651089AA CRC32;

Query Match 62.0%; Score 57; DB 2; Length 225;
Best Local Similarity 36.4%; Pred. No. 9.11e-01;
Matches 4; Conservative 6; Mismatches 1; Indels 0; Gaps 0;

Db 48 QVCIDTDSPT 58
   :||| :|||
QY 1 EICLDPEAPFL 11

RESULT 10
ID Q06321 PRELIMINARY; PRT; 1198 AA.
AC Q06321;
DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE SIMILARITY TO UDP-GLUCURONOSYLTRANSFERASES.
GN L9470.23.
OS SACCHAROMYCES CEREVISIAE (BAKER'S YEAST).
OC EUKARYOTA; FUNGI; ASCOMYCOTA; HEMIASCOMICETES; SACCHAROMYCETES;
OC SACCHAROMYCETACEAE; SACCHAROMYCES.
[1]
RN SEQUENCE FROM N.A.
RP STRAIN-S288C (AB972);
RC MEDLINE; 97313267.
RA JOHNSTON M., HILLIER L., RILES L., ALBERMANN K., ANDRE B., ANSORGE W.,
RA BENES V., BRUCKNER M., DELIUS H., DUBOIS E., DUSTERHOFT A.,
RA ENTIAN K.D., FLOETH M., GOFFEAU A., HEBLING U., HEUMANN K., P.,
RA HEUSS-NEITZEL D., HILBERT H., HILGER F., KLEINE K., KOTTER P.,
RA LOUIS E.J., MESSENGUY F., MEWES H.W., MIOGSA T., MOSTL D.,

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RA MULLER-AUER S., NENTWICH U., OBERMAIER B., PIRAVANDI E., POHL T.M.,
 RA PORTELE D., PURNELLE B., RECHMANN S., RIEGER M., RINKE M., ROSE M.,
 RA SCHARFE M., SCHERINS B., SCHOLLER P., SCHWAGER C., SCHWARZ S.,
 RA UNDERWOOD A.P., URRESTARAZU L.A., VANDENBOL M., VERHASSELT P.,
 RA VIERENDEELS F., VOET M., VOLCKAERT G., VOSS H., WAMBITT R., WEDLER E.,
 RA WEDLER H., ZIMMERMANN F.K., ZOLLNER A., HANI J., HOEISEL J.D.,
 RT "The nucleotide sequence of Saccharomyces cerevisiae chromosome
 RT XII";
 RL NATURE 387:0-0(0).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC STRAIN-S288C (AB972);
 RA WOHLDMANN P.;
 RL SUBMITTED (NOV-1994) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [3]
 RP SEQUENCE FROM N.A.
 RC STRAIN-S288C (AB972);
 RA WATERSTON R.;
 RL SUBMITTED (NOV-1994) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [4]
 RP SEQUENCE FROM N.A.
 RC STRAIN-S288C (AB972);
 RA CHERRY J.M.;
 RL SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; U17246; G577215; -;
 DR PFAM; PF00169; PH; 1.
 KW TRANSFERASE.
 SQ SEQUENCE 1198 AA; 136053 MW; 9F764258 CRC32;

Query Match 62.0%; Score 57; DB 3; Length 1198;
 Best Local Similarity 54.5%; Pred. No. 9.11e-01;
 Matches 6; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 193 FCLDQEPFLN 203
 :||| : |||:
 QY 2 ICLDPEAPFLK 12

RESULT 11
 ID Q28724 PRELIMINARY; PRT; 66 AA.
 AC Q28724;
 DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
 DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST SEQUENCE UPDATE)
 DE PERMEABILITY FACTOR 2 (FRAGMENT).
 GN RPF2.
 OS ORYCTOLAGUS CUNICULUS (RABBIT).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC LAGOMORPHA; LEPORIDAE; ORYCTOLAGUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN-NEW ZEALAND WHITE;
 RX MEDLINE; 95129889.
 RA JOHNSON M.C., GOODMAN R.B. II, KAJIKAWA O., WONG V.A., MONGOVIN S.M.,
 RA MARTIN T.R.;
 RT "Cloning of two rabbit GRO homologues and their expression in
 RT alveolar macrophages";
 RL GENE 151:337-338(1994).
 DR EMBL; L28933; G455343; -;
 DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 DR PFAM; PF00048; I18; 1.
 FT NON_TER 1
 SQ SEQUENCE 66 AA; 7102 MW; D4C4BC7D CRC32;

Query Match 60.9%; Score 56; DB 6; Length 66;
 Best Local Similarity 58.3%; Pred. No. 1.48e+00;
 Matches 7; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Db 42 EACLNPAPMKV 53
 :||| : |||:
 QY 1 EICLDPEAPFLK 12

RESULT 12
 ID Q7753; PRELIMINARY; PRT; 119 AA.
 AC Q7753;
 DT 01-NOV-1998 (TREMBLREL. 08, CREATED)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE TYPE IIA PROCOLLAGEN (FRAGMENT).
 OS CANIS FAMILIARIS (DOG).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC CARNIVORA; FISSIPEDIA; CANIDAE; CANIS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RA DU E., ACLAND G.M., RAY J.;
 RT "Differential Expression of Type II Procollagen mRNA in Canine
 RT Retina";
 RL SUBMITTED (SEP-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; AF023169; G3687592; -;
 DR PROSITE; PS01208; VWFC; 1.
 FT NON_TER 1
 FT NON_TER 119
 SQ SEQUENCE 119 AA; 12413 MW; 619469D2 CRC32;

Query Match 60.9%; Score 56; DB 6; Length 119;
 Best Local Similarity 75.0%; Pred. No. 1.48e+00;
 Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 58 CLSPETPF 65
 :||| : |||:
 QY 3 CLDPEAPF 10

RESULT 13
 ID Q40243 PRELIMINARY; PRT; 212 AA.
 AC Q40243;
 DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
 DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE SELF-INCOMPATIBILITY GLYCOPROTEIN (ALLELE S6) PRECURSOR (FRAGMENT).
 OS LYCOPERSICON PERUVIANUM (PERUVIAN TOMATO).
 OC EUKARYOTA; VIRIDIPANTAE; STREPTOPHYTA; EMBRYOPHYTA; TRACHEOPHYTA;
 OC EUPHYLOPHYTES; SPERMATOPHYTA; MAGNOLIOPHYTA; EUDICOTYLEDONS;
 OC ASTERIDAE; SOLANACEAE; SOLANACEAE; SOLANUM.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN-LA 2163; TISSUE=STYLE;
 RX MEDLINE; 94294411.
 RA ROYO J., KUNZ C., KOWYAMA Y., ANDERSON M., NEWBIGIN E., CLARKE A.;
 RT "Loss of a histidine residue at the active site of S-locus
 RT ribonuclease is associated with self-compatibility in Lycopersicon
 RT peruvianum";
 RL PROC. NATL. ACAD. SCI. U.S.A. 91:6511-6514(1994).
 DR EMBL; Z26583; G404315; -;
 DR PFAM; PF00445; Ribonuclease_T2; 1.
 KW SIGNAL.
 FT NON_TER 1
 FT SIGNAL <1
 FT CHAIN 13 212
 FT CHAIN 13 212
 SQ SEQUENCE 212 AA; 24733 MW; 182D7702 CRC32;

Query Match 60.9%; Score 56; DB 10; Length 212;
 Best Local Similarity 77.8%; Pred. No. 1.48e+00;
 Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 184 ICLDPEAPK 192
 :||| : |||:
 QY 2 ICLDPEAPF 10

RESULT 14
 ID Q40243 PRELIMINARY; PRT; 218 AA.
 AC Q40243;
 DT 01-NOV-1996 (TREMBLREL. 01, CREATED)

Sat Feb 5 15:13:56 2000

DT 01-NOV-1996 (TREMREL. 01, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
 DE SELF-INCOMPATIBILITY GLYCOPROTEIN (NON- FUNCTIONAL ALLELE) PRECURSOR
 DE (FRAGMENT).
 OS LYCOPERSICON PERUVIANUM (PERUVIAN TOMATO).
 OC EUKARYOTA; VIRIDIPHYTES; EMBRYOPHYTES; TRACHEOPHYTES;
 OC EUPHYLOPHYTES; SPERMATOPHYTES; MAGNOLIOPHYTES; EUDICOTYLEDONS;
 OC ASTERIDAE; SOLANACEAE; SOLANACEAE; SOLANACEAE;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=LA 2157; TISSUE=STYLE;
 RX MEDLINE; 94294411.
 RA ROYO J., KUNZ C., KONYAMA Y., ANDERSON M., NEWBIGIN E., CLARKE A.;
 RT "Loss of a histidine residue at the active site of S-locus
 RT ribonuclease is associated with self-compatibility in Lycopersicon
 RT peruvianum";
 RL PROC. NATL. ACAD. SCI. U.S.A. 91:6511-6514(1994).
 DR EMBL; Z26581; G404334; .
 DR PFAM; PF00445; Ribonuclease_T2; 1.

FT SIGNAL. 1 1
 FT NON_TER <1 17
 FT SIGNAL 18 218
 FT CHAIN 18 218
 FT FT
 FT FT
 FT FT
 SQ SEQUENCE 218 AA; 25384 MW; 1EB4B4CB CRC32;
 POTENTIAL.
 SELF-INCOMPATIBILITY GLYCOPROTEIN
 (NON-FUNCTIONAL ALLELE).

Query Match 60.9%; Score 56; DB 10; Length 218;
 Best Local Similarity 77.8%; Pred. No. 1.48e+00;
 Matches 7; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

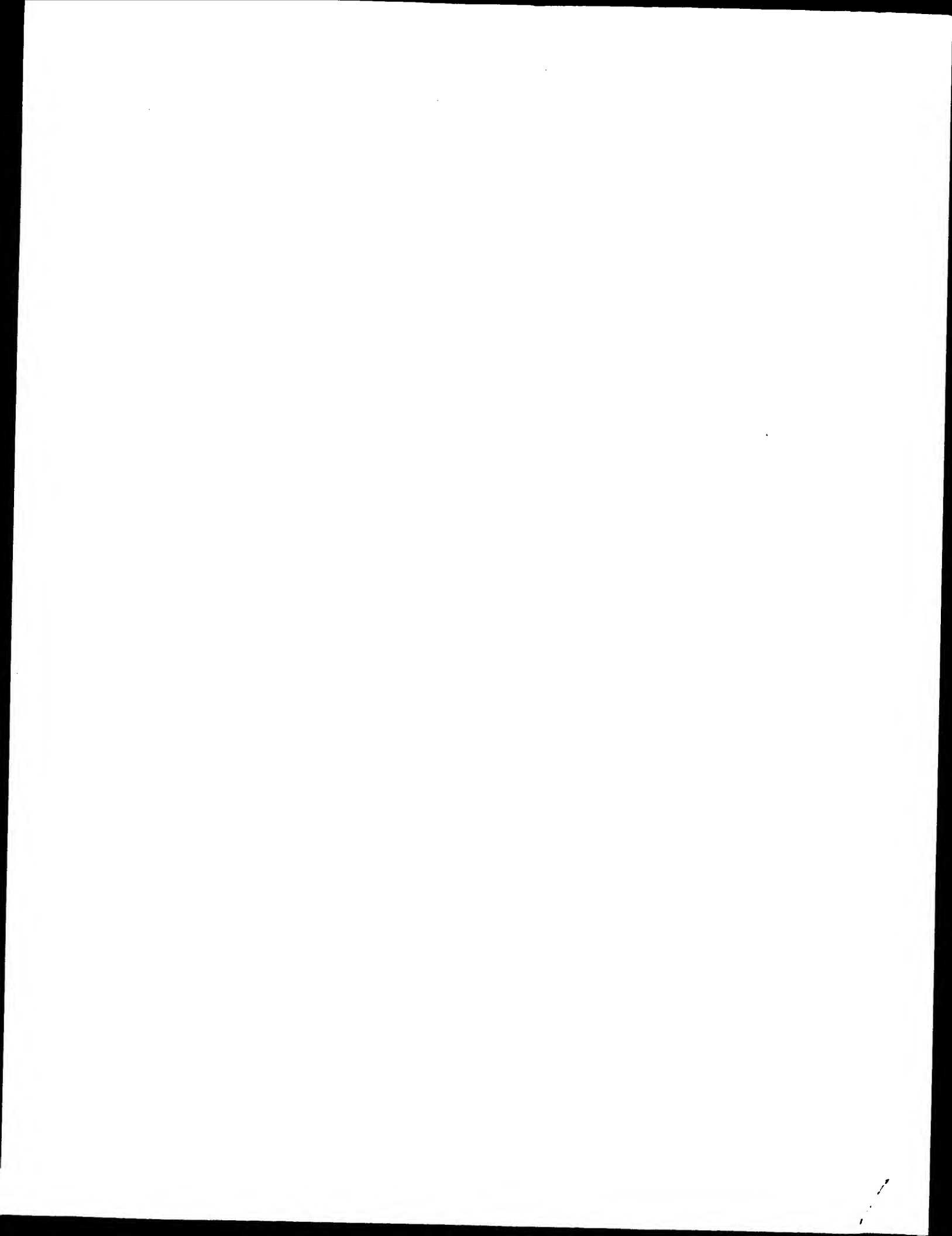
Db 190 ICLDPEAKY 198
 QY 2 ICLDPEAF 10

RESULT 15
 ID Q98843 PRELIMINARY; PRT; 458 AA.
 AC Q98843;
 DT 01-FEB-1997 (TREMREL. 02, CREATED)
 DT 01-FEB-1997 (TREMREL. 02, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
 DE DOPAMINE D1B RECEPTOR.
 DE D1B.
 OS ANGUILLA ANGUILLA (EUROPEAN FRESHWATER EEL).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; ACTINOPTERYGII; NEOPTERYGII;
 OC TELEOSTEI; ANGUILLIFORMES; ANGUILLIDAE; ANGUILLA.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 97160583.
 RA CARDINAUD B., COUDOUDEL S., VINCENT J.D., VERNIER P.;
 RT "Early emergence of three dopamine D1 receptor subtypes in
 RT vertebrates: Molecular phylogenetic, pharmacological, and functional
 RT criteria defining D1A, D1B, and D1C receptors in European eel
 RT Anguilla anguilla";
 RL J. BIOL. CHEM. 272:2778-2787(1997).
 CC -1- SUBCELLULAR LOCATION: INTEGRAL MEMBRANE PROTEIN (BY SIMILARITY).
 DR EMBL; U62920; G1518040; .
 DR PROSITE; PS00237; G_PROTEIN_RECEPTOR; 1.
 DR PFAM; PF00001; 7tm_1; 1.
 DR G-PROTEIN COUPLED RECEPTOR; TRANSMEMBRANE; GLYCOPROTEIN.
 SQ SEQUENCE 458 AA; 51941 MW; AFC9662D CRC32;

Query Match 60.9%; Score 56; DB 13; Length 458;
 Best Local Similarity 70.0%; Pred. No. 1.48e+00;
 Matches 7; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Db 443 DCLDRLAPF 452
 QY 1 EICLDPEAF 10

Search completed: Fri Feb 4 17:17:30 2000
 Job time : 60 secs.



 M P E R L H

 (TM)

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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm
 Run on: Fri Feb 4 17:28:08 2000; MasPar time 5.07 Seconds
 129.163 Million cell updates/sec
 Tabular output not generated.

Title: >US-09-150-813-43
 Description: (1-12) from US09150813.pep
 Perfect Score: 91
 Sequence: 1 QVCADPSESQWQ 12

Scoring table: PAM 150
 Gap 15

Searched: 179066 seqs, 54579741 residues
 Post-processing: Minimum Match 0%
 Listing first 45 summaries

Database: spstrembl9
 1:sp_archaea 2:sp_bacteria 3:sp_fungi 4:sp_human
 5:sp_invertebrate 6:sp_mammal 7:sp_mhc 8:sp_organelle
 9:sp_phase 10:sp_plant 11:sp_rodent 12:sp_unclassified
 13:sp_vertebrate 14:sp_virus

Statistics: Mean 25.020; Variance 34.042; scale 0.735
 Pred. No. is the number of results predicted by chance to have a
 score greater than or equal to the score of the result being printed,
 and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description	Pred. No.
1	86	94.5	80	4	Q14745	1.64e-06
2	74	81.3	120	4	Q15467	8.65e-04
3	73	80.2	95	14	Q98158	1.43e-03
4	70	76.9	133	11	Q09002	6.38e-03
5	70	76.9	133	11	Q09006	6.38e-03
6	67	73.6	134	4	Q00585	2.76e-02
7	67	73.6	395	11	Q35933	2.76e-02
8	67	73.6	395	11	Q35188	2.76e-02
9	66	72.5	97	11	Q89093	4.47e-02
10	66	72.5	203	14	Q67634	4.47e-02
11	65	71.4	91	4	Q43646	7.20e-02
12	65	71.4	119	4	Q00175	7.20e-02
13	64	70.3	95	4	Q39664	1.16e-01
14	63	69.2	552	5	Q46178	1.85e-01
15	62	68.1	92	11	Q84300	2.94e-01
16	62	68.1	94	14	Q98157	2.94e-01
17	62	68.1	96	11	P97884	2.94e-01
18	62	68.1	104	13	Q73912	2.94e-01
19	61	67.0	93	4	Q00626	4.67e-01
20	61	67.0	108	11	Q70460	4.67e-01

21	61	67.0	109	4	Q43927	CXC CHEMOKINE PRECURSOR	4.67e-01
22	60	65.9	97	13	Q57411	LYMPHOTACTIN PRECURSOR	7.38e-01
23	60	65.9	101	13	Q34442	LFCA-1 PROTEIN PRECURS	7.38e-01
24	59	64.8	397	4	P78423	CX3C CHEMOKINE PRECURS	1.16e+00
25	58	63.7	96	13	Q90825	CYTOKINE.	1.82e+00
26	58	63.7	97	6	Q62812	INTERLEUKIN-8 (FRAGEN	1.82e+00
27	58	63.7	252	14	P89687	VIF PROTEIN.	1.82e+00
28	57	62.6	529	2	Q06394	HYPOTHETICAL 57.1 KD P	2.83e+00
29	57	62.6	761	11	Q08762	PROTEASE, SERINE, 12 N	2.83e+00
30	56	61.5	350	11	Q09132	PROTEIN TYROSINE KINAS	4.39e+00
31	55	60.4	106	2	Q49811	B2168_C1_194.	6.77e+00
32	55	60.4	377	3	Q60088	HYPOTHETICAL 41.6 KD P	6.77e+00
33	54	59.3	549	4	Q14296	FAST KINASE.	1.04e+01
34	53	58.2	109	11	Q55038	B LYMPHOCYTE CHEMOATTR	1.59e+01
35	53	58.2	535	4	Q15830	MUTY HOMOLOG.	1.59e+01
36	53	58.2	860	14	Q93091	ENVELOPE GLYCOPROTEIN.	1.59e+01
37	53	58.2	949	5	P90956	T01D3.3 PROTEIN.	1.59e+01
38	53	58.2	1032	11	Q62780	RNA HELICASE.	1.59e+01
39	53	58.2	1840	13	Q90831	TRANSITIN.	1.59e+01
40	53	58.2	2180	5	Q01768	SIMILARITY TO EGF-LIKE	1.59e+01
41	52	57.1	253	2	Q53582	HYPOTHETICAL PROTEIN (2.41e+01
42	52	57.1	321	2	Q69128	PUTATIVE EPIMERASE/DEH	2.41e+01
43	52	57.1	505	4	Q15375	PUTATIVE MONOCARBOXYLA	2.41e+01
44	52	57.1	1200	2	P73340	CHROMOSOME SEGREGATION	2.41e+01
45	52	57.1	1396	5	P90865	T24B8.7 PROTEIN.	2.41e+01

ALIGNMENTS

RESULT	1	PRELIMINARY;	PRT;	80 AA.
ID	Q14745			
AC	Q14745			
DT	01-NOV-1996 (TREMBLREL. 01, CREATED)			
DT	01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)			
DT	01-JAN-1999 (TREMBLREL. 09, LAST ANNOTATION UPDATE)			
DE	LD78 ALPHA BETA PRECURSOR (FRAGMENT).			
OS	HOMO SAPIENS (HUMAN).			
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;			
OC	CATARRHINI; HOMINIDAE; HOMO.			
RN	[1]			
RP	SEQUENCE FROM N.A.			
RC	TISSUE-BRAIN;			
RA	ISHIZUKA K., IGATA-YI R., NARUSE K., NAKASHIMA H., OHUCHI K.,			
RA	KATSURAGI S., KIN Y., OHMOTO Y., NOMIYAMA H., IIO M., MIURA R.,			
RA	MIYAKAWA T.;			
RL	SUBMITTED (AUG-1995) TO EMBL/GENBANK/DBJ DATA BANKS.			
DR	EMBL; D63785; D1010501; -			
DR	PROSITE; P500472; SMALL_CYTOKINES_CC; 1.			
DR	PFAM; PF00048; 118; 1.			
KW	SIGNAL.			
FT	NON_TER	1	POTENTIAL.	
FT	SIGNAL	<1	LD78 ALPHA BETA.	
FT	CHAIN	17		
FT	NON_TER	80		
SQ	SEQUENCE	80 AA; 8857 MW; 3F87F1C6 CRC32;		

Query Match 94.5%; Score 86; DB 4; Length 80;
 Best Local Similarity 91.7%; Pred. No. 1.64e-06;
 Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db	65	QVCADPSESQWQ 76	
Qy	1	QVCADPSESQWQ 12	
RESULT	2	PRELIMINARY;	PRT; 120 AA.
ID	Q15467		
AC	Q15467		
DT	01-JAN-1998 (TREMBLREL. 05, CREATED)		
DT	01-JAN-1998 (TREMBLREL. 05, LAST SEQUENCE UPDATE)		
DT	01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)		
DE	IL-10-INDUCIBLE CHEMOKINE.		
GN	IL10CK OR SCYLA5.		

OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
 OC CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RN SEQUENCE FROM N.A.
 RA HEDRICK J.A., HELMS A., GORMAN D., ZLOTNIK A.;
 RL SUBMITTED (NOV-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [2]
 RN SEQUENCE FROM N.A.
 RC TISSUE=LIVER;
 RA SHOUDEI K., HIESHIMA K., FUKUDA S., IIO M., MIURA R., IMAI T.,
 RA YOSHIE O., NOMIYAMA H.;
 RL BIOCHIM. BIOPHYS. ACTA 0:0-0(1998).
 RN [3]
 RN SEQUENCE FROM N.A.
 RA NOMIYAMA H.;
 RT "Structure of a region of 181 kb containing five CC chemokine
 RT genes";
 RL SUBMITTED (AUG-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [4]
 RN SEQUENCE FROM N.A.
 RX MEDLINE; 98308096.
 RA YOUN B.S., ZHANG S., BROXMEYER H.E., ANTOL K., FRASER M.J. JR.,
 RA HANGOC G., KWON B.S.;
 RT "Isolation and characterization of LMC, a novel lymphocyte and
 RT monocyte chemoattractant human CC chemokine, with myelosuppressive
 RT activity";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 247:217-222(1998).
 DR EMBL; U91746; G2581781; -;
 DR EMBL; AB007454; D1024963; -;
 DR EMBL; AF088219; G3719365; -;
 DR EMBL; AF055467; G3395776; -;
 DR PFAM; PF00048; 118; 1.
 KW SIGNAL.
 SQ SEQUENCE 120 AA; 13600 MW; A079DF66 CRC32;
 Query Match 81.3%; Score 74; DB 4; Length 120;
 Best Local Similarity 50.0%; Pred. No. 8.65e-04;
 Matches 6; Conservative 5; Mismatches 1; Indels 0; Gaps 0;
 Db 74 EVCTNPNDWVQ 85
 Qy :||:|:|:|
 1 QVCADPSESVMQ 12

RESULT 3
 ID Q98158 PRELIMINARY; PRT; 95 AA.
 AC Q98158; 012569;
 DT 01-FEB-1997 (TREMBLREL. 02, CREATED)
 DT 01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE ORF K6.
 OS KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS.
 OC VIRUSES; DSDNA VIRUSES, NO RNA STAGE; HERPESVIRIDAE;
 OC GAMMAHERPESVIRINAE; RHADINOVIRUS.
 RN [1]
 RN SEQUENCE FROM N.A.
 RX MEDLINE; 97094384.
 RA MOORE P.S., BASHOFF C., WEISS R.A., CHANG Y.;
 RT "Molecular mimicry of human cytokine and cytokine response pathway
 RT genes by KSHV";
 RL SCIENCE 274:1739-1744(1996).
 RN [2]
 RN SEQUENCE FROM N.A.
 RX MEDLINE; 97121480.
 RA RUSSO J.J., BOHENZKY R.A., CHIEN M.C., CHEN J., YAN M., MADDALENA D.,
 RA PARRY J.P., PERUZZI D., EDELMAN I.S., CHANG Y., MOORE P.S.;
 RT "Nucleotide sequence of the Kaposi sarcoma-associated herpesvirus
 RT (HIV8)";
 RL PROC. NATL. ACAD. SCI. U.S.A. 93:14862-14867(1996).
 RN [3]
 RN SEQUENCE FROM N.A.
 RA RUSSO J.J., BOHENZKY R.A., CHIEN M.C., CHEN J., YAN M., MADDALENA D.,

RA PARRY J.P., PERUZZI D., EDELMAN I.S., CHANG Y., MOORE P.S.;
 RL SUBMITTED (OCT-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [4]
 RN SEQUENCE FROM N.A.
 RA NICHOLAS J., RUVOLO V.R., BURNS W.H., SANDFORD G., WAN X., CIUFO D.,
 RA HENDRICKSON S., GUO H.G., HAYWARD G.S., REITZ M.S.;
 RL SUBMITTED (NOV-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [5]
 RN SEQUENCE FROM N.A.
 RA RUSSO J.J., BOHENZKY R.A., CHIEN M.C., CHEN J., YAN M., MADDALENA D.,
 RA PARRY J.P., PERUZZI D., EDELMAN I.S., CHANG Y., MOORE P.S.;
 RL SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [6]
 RN SEQUENCE FROM N.A.
 RX MEDLINE; 97296220.
 RA NEIPEL F., ALBRECHT J.C., FLECKENSTEIN B.;
 RT "Cell-homologous genes in the Kaposi's sarcoma-associated
 RT rhadinovirus human herpesvirus 8: determinants of its
 RT pathogenicity";
 RL J. VIROL. 71:4187-4192(1997).
 RN [7]
 RN SEQUENCE FROM N.A.
 RA SUN R., LIN S.-F., MILLER G.;
 RL SUBMITTED (SEP-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; U75698; G1718266; -;
 DR EMBL; U74585; G1658273; -;
 DR EMBL; U93872; G2246546; -;
 DR EMBL; U11366; G3551763; -;
 DR PFAM; PF00048; 118; 1.
 KW HYPOTHETICAL PROTEIN.
 SQ SEQUENCE 95 AA; 10485 MW; 5283348D CRC32;
 Query Match 80.2%; Score 73; DB 14; Length 95;
 Best Local Similarity 66.7%; Pred. No. 1.43e-03;
 Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
 Db 74 QICADPSKNWVR 85
 Qy :||:|:|:|
 1 QVCADPSESVMQ 12

RESULT 4
 ID Q09002 PRELIMINARY; PRT; 133 AA.
 AC Q09002;
 DT 01-JUL-1997 (TREMBLREL. 04, CREATED)
 DT 01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE SMALL INDUCIBLE CYTOKINE A21 (TCA4).
 GN SCYA21
 OS MUS MUSCULUS (MOUSE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
 OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
 RN [1]
 RN SEQUENCE FROM N.A.
 RC TISSUE=THYMUS.
 RA TANABE S., LU Z., LUO Y., QUACKENBUSH E.J., BERMAN M.A.,
 RA COLLINS-RACIE L.A., MI S., REILLY C., LO D., JACORS K.A., DORF M.E.;
 RL SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [2]
 RN SEQUENCE FROM N.A.
 RX MEDLINE; 97400322.
 RA HEDRICK J.A., ZLOTNIK A.;
 RT "Identification and characterization of a novel beta chemokine
 RT containing six conserved cysteines";
 RL J. IMMUNOL. 159:1589-1593(1997).
 RN [3]
 RN SEQUENCE FROM N.A.
 RA HEDRICK J.A., ZLOTNIK A.;
 RL SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; AF006637; G2209189; -;
 DR EMBL; AF001980; G2624927; -;
 DR MGI; MGI:1097677; SCYA21.
 DR PFAM; PF00048; 118; 1.

Sat Feb 5 12:04:29 2000

SO SEQUENCE 133 AA; 14558 MW; C0532523 CRC32;

Query Match 76.9%; Score 70; DB 11; Length 133;
Best Local Similarity 58.3%; Pred. No. 6.38e-03;
Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 73 ELCANPEGWVQ 84
:::|:|:|
QY 1 QVCADPSESQVQ 12

RESULT 5 PRELIMINARY; PRT; 133 AA.
ID O09006;
AC O09006;
DT 01-JUL-1997 (TREMELREL. 04, CREATED)
DT 01-AUG-1998 (TREMELREL. 07, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMELREL. 08, LAST ANNOTATION UPDATE)
DE BETA CHEMOKINE EXODUS-2.
GN SCYA21.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-TOTAL FETUS;
RX MEDLINE; 97444139.
RA HROMAS R., KIM C.H., KLEMSZ M., KRATHWOHL M., FIFE K., COOPER S.,
RA SCHNITZLEIN-BICK C., BROXMEYER H.E.;
RA "Isolation and characterization of Exodus-2, a novel C-C chemokine
with a unique 37-amino acid carboxyl-terminal extension.";
RT J. IMMUNOL. 159:2554-2558(1997).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE-TOTAL FETUS;
RA HROMAS R.A.;
RL SUBMITTED (JUN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; U88322; G3169697;
DR MGD; MGI:1097677; SCYA21.
DR PFAM; PF00048; I18; 1.
SQ SEQUENCE 133 AA; 14600 MW; B34A5E22 CRC32;

Query Match 76.9%; Score 70; DB 11; Length 133;
Best Local Similarity 58.3%; Pred. No. 6.38e-03;
Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 73 ELCANPEGWVQ 84
:::|:|:|
QY 1 QVCADPSESQVQ 12

RESULT 6 PRELIMINARY; PRT; 134 AA.
ID O00585;
AC O00585;
DT 01-JUL-1997 (TREMELREL. 04, CREATED)
DT 01-JUL-1997 (TREMELREL. 04, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMELREL. 08, LAST ANNOTATION UPDATE)
DE BETA CHEMOKINE EXODUS-2.
OS HOMO SAPIENS (HUMAN)
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RA HROMAS R.A.; GRAY P., KLEMSZ M., FIFE K., BROXMEYER H.;
RL SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE; 97400322.
RA HEDRICK J.A., ZLOTNIK A.;
RT "Identification and characterization of a novel beta chemokine
containing six conserved cysteines.";
RL J. IMMUNOL. 159:1589-1593(1997).
RN [3]
RP SEQUENCE FROM N.A.

RA HEDRICK J.A., ZLOTNIK A.;
RL SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [4]
RP SEQUENCE FROM N.A.
RA NAGIRA M., IMAI T., HIESHIMA K., KUSUDA J., RIDANPAA M., TAKAGI S.,
RA NISHIMURA M., KAKIZAKI M., NOMIYAMA H., YOSHIE O.;
RL SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; U88320; G2196920;
DR EMBL; AF001979; G2624925;
DR EMBL; AB002409; D1022673;
DR PFAM; PF00048; I18; 1.
SQ SEQUENCE 134 AA; 14646 MW; FE86A239 CRC32;

Query Match 73.6%; Score 67; DB 4; Length 134;
Best Local Similarity 66.7%; Pred. No. 2.76e-02;
Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 73 ELCADPKELVQ 84
:::|:|:|
QY 1 QVCADPSESQVQ 12

RESULT 7 PRELIMINARY; PRT; 395 AA.
ID O35933;
AC O35933;
DT 01-JAN-1998 (TREMELREL. 05, CREATED)
DT 01-JAN-1998 (TREMELREL. 05, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMELREL. 08, LAST ANNOTATION UPDATE)
DE FRACALKINE.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN-BALB/C; TISSUE-BRAIN;
RA ROSSI D., HARDMAN G., COPELAND N., GILBERT D.J., JENKINS N.,
RA ZLOTNIK A., BAZAN J.F.;
RL SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; U92565; G2459677;
DR PFAM; PF00048; I18; 1.
SQ SEQUENCE 395 AA; 42040 MW; 3997A113 CRC32;

Query Match 73.6%; Score 67; DB 11; Length 395;
Best Local Similarity 80.0%; Pred. No. 2.76e-02;
Matches 8; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Db 74 CADPKKVVQ 83
|:|:|:|:|
QY 3 CADPSESQVQ 12

RESULT 8 PRELIMINARY; PRT; 395 AA.
ID O35188;
AC O35188;
DT 01-JAN-1998 (TREMELREL. 05, CREATED)
DT 01-JAN-1998 (TREMELREL. 05, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMELREL. 08, LAST ANNOTATION UPDATE)
DE NEUROTACTIN.
GN SCYD1.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 97320499.
RA PAN Y., CLARE L., HONG Z., DOLICH S., DEEDS J., GONZALO J., VATH J.,
RA GOSSELIN M., MA J., DUSSAULT B., WOLF B., ALPERIN A., CULPEPPER J.,
RA GUTIERREZ-RAMOS J.C., GEARING D.;
RA "Neurotactin, a membrane-anchored chemokine upregulated in brain
inflammation.";
RT NATURE 387:611-617(1997).
RL EMBL; AF010586; G2317698;
DR MGD; MGI:1097153; SCYD1.
DR

DR PFAM; PF00048; 118; 1.
SQ SEQUENCE 395 AA; 42098 MW; E3CD0612 CRC32;
Query Match 73.6%; Score 67; DB 11; Length 395;
Best Local Similarity 80.0%; Pred. No. 2.76e-02;
Matches 8; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
Db 74 CADPKQKWQ 83
|||||
Qy 3 CADPSESQWQ 12

RESULT 9
ID 089093 PRELIMINARY; PRT; 97 AA.
AC 089093;
DT 01-NOV-1998 (TREMBLREL. 08, CREATED)
DT 01-NOV-1998 (TREMBLREL. 08, LAST SEQUENCE UPDATE)
DE CC CHEMOKINE ST38 PRECURSOR.
GN LARC.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RP SEQUENCE FROM N.A.
RA UTANS-SCHNEITZ U., LOREZ H., KLINKERT W.E.F., DA SILVA J.,
RA LESSLAUER W.;
RT "A novel rat CC chemokine, identified by targeted differential
display, is upregulated in brain inflammation.";
RL J. NEUROIMMUNOL. 0:0-0(1998).
RN [2]
RP SEQUENCE FROM N.A.
RA VILLARES R.;
RL SUBMITTED (JUL-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; AF053313; G3551819; -;
DR EMBL; AJ007862; E1312757; -;
KW SIGNAL.
FT SIGNAL. 1 27 POTENTIAL.
FT CHAIN 28 97 CC CHEMOKINE ST38.
SQ SEQUENCE 97 AA; 10826 MW; 053405BD CRC32;
Query Match 72.5%; Score 66; DB 11; Length 97;
Best Local Similarity 70.0%; Pred. No. 4.47e-02;
Matches 7; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
Db 74 CADPKQKWQ 83
|||||
Qy 2 CADPSESQWQ 11

RESULT 10
ID 067634 PRELIMINARY; PRT; 203 AA.
AC 067634;
DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
DE ECO Q PROTEIN (FRAGMENT)
OS GALLID HERPESVIRUS TYPE 1.
OC VIRUSES; DSDNA VIRUSES; NO RNA STAGE; HERPESVIRIDAE;
OC ALPHAHERPESVIRINAE; VARICELLOVIRUS.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN-GA;
RX MEDLINE; 96074534.
RA PENG Q., ZENG M., BHUIYAN Z.A., UBUKATA E., TANAKA A., NONOYAMA M.,
RA SHIRAZI Y.;
RT Isolation and characterization of Marek's disease virus (MDV) cDNAs
mapping to the BamHI-12, BamHI-Q2, and BamHI-L fragments of the MDV
genome from lymphoblastoid cells transformed and persistently
infected with MDV.;
RL VIROLOGY 213:590-599(1995).
DR EMBL; U34966; G1185444; -;
DR PFAM; PF00048; 118; 1.

FT NON_TER 1
SQ SEQUENCE 203 AA; 23132 MW; 887D04C3 CRC32;
Query Match 72.5%; Score 66; DB 14; Length 203;
Best Local Similarity 63.6%; Pred. No. 4.47e-02;
Matches 7; Conservative 1; Mismatches 3; Indels 0; Gaps 0;
Db 145 VCDPEAPWQ 155
|||||
Qy 2 VCDPSESQWQ 12

RESULT 11
ID 043646 PRELIMINARY; PRT; 91 AA.
AC 043646;
DT 01-JUN-1998 (TREMBLREL. 06, CREATED)
DT 01-JUN-1998 (TREMBLREL. 06, LAST SEQUENCE UPDATE)
DE CC CHEMOKINE ST38 PRECURSOR.
GN SCYA5.
OS HOMO SAPIENS (HUMAN)
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RA JANG J.S., KIM B.E.;
RL SUBMITTED (JAN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [2]
RP SEQUENCE FROM N.A.
RA NOMIYAMA H.;
RT "Structure of a region of 181 kb containing five CC chemokine
genes";
RL SUBMITTED (AUG-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; AF043341; G2905632; -;
DR EMBL; AF088219; G3719366; -;
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
KW SIGNAL.
FT SIGNAL. 1 23 POTENTIAL.
FT CHAIN 24 91 RANTES.
SQ SEQUENCE 91 AA; 9990 MW; CF404FAD CRC32;
Query Match 71.4%; Score 65; DB 4; Length 91;
Best Local Similarity 58.3%; Pred. No. 7.20e-02;
Matches 7; Conservative 2; Mismatches 3; Indels 0; Gaps 0;
Db 71 QVCANPEKKWVR 82
|||||
Qy 1 QVCADPSESQWQ 12

RESULT 12
ID 000175 PRELIMINARY; PRT; 119 AA.
AC 000175;
DT 01-JUL-1997 (TREMBLREL. 04, CREATED)
DT 01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
DE MP1F-2.
OS HOMO SAPIENS (HUMAN)
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RA PATEL V.P., KREIDER B.L., LI Y., LI H., LEUNG K., SALCEDO T.,
RA NARDELLI B., PIPALLA V., GENTZ S., THOTAKURA R., PARMELEE D.,
RA GENTZ R., GAROTTA G.;
RL J. EXP. MED. 0:0-0(0).
DR EMBL; U85768; G1916252; -;
DR PFAM; PF00048; 118; 1.
SQ SEQUENCE 119 AA; 13119 MW; CDF526F0 CRC32;
Query Match 71.4%; Score 65; DB 4; Length 119;
Best Local Similarity 58.3%; Pred. No. 7.20e-02;
Matches 7; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Db 72 QFCGPKQEWV 83
QY 1 QVCADPSESQV 12

RESULT 13
ID Q99664 PRELIMINARY; PRT; 95 AA.
AC Q99664;
DT 01-MAY-1997 (TREMBREL. 03, CREATED)
DT 01-MAY-1997 (TREMBREL. 03, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBREL. 08, LAST ANNOTATION UPDATE)
DE CHEMOKINE EXODUS.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-PANCREAS;
RX MEDLINE; 97275143.
RA HROMAS R., GRAY P.W., CHANTRY D., GODISKA R., KRATHWOHL M., FIFE K.,
RA BELL G.I., TAKEDA J., ARONICA S., GORDON M., COOPER S.,
RA BROXMEYER H.E., KLEMSZ M.J.;
RT "cloning and characterization of exodus, a novel beta-chemokine."
RL BLOOD 89:3315-3322(1997).
DR EMBL; U64197; GI778717; -.
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; i18; 1.
SQ SEQUENCE 95 AA; 10691 MW; 1526B4C0 CRC32;

Query Match 70.3%; Score 64; DB 4; Length 95;
Best Local Similarity 60.0%; Pred. No. 1.16e-01;
Matches 6; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

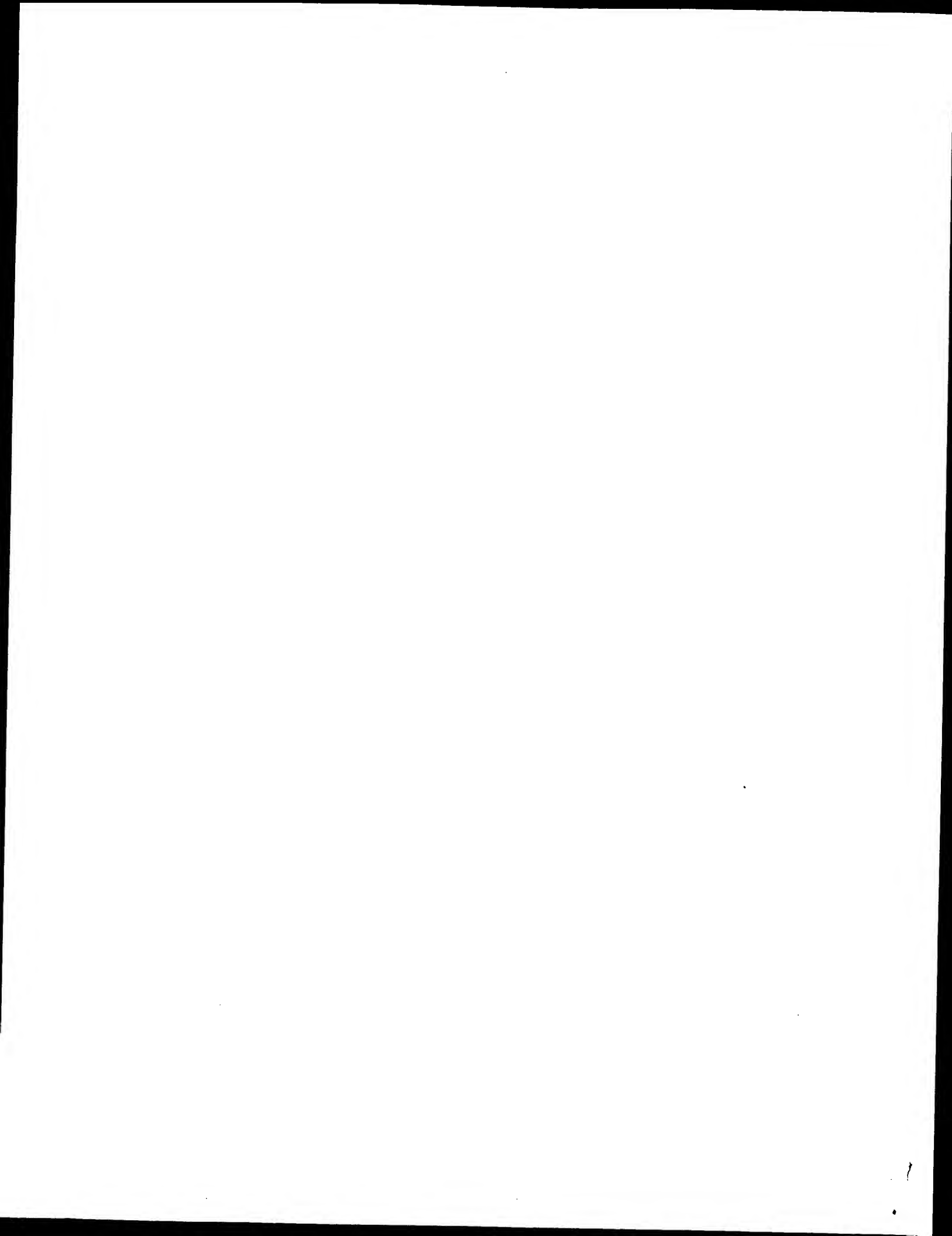
Db 72 VCANPKQTV 81
QY 2 VCADESESQV 11

RESULT 14
ID Q46178 PRELIMINARY; PRT; 552 AA.
AC Q46178;
DT 01-JUN-1998 (TREMBREL. 06, CREATED)
DT 01-JUN-1998 (TREMBREL. 06, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBREL. 08, LAST ANNOTATION UPDATE)
DE RADIAL SPOKEHEAD.
OS STRONGYLOCENTROTUS PURPURATUS (PURPLE SEA URCHIN).
OC EUKARYOTA; METAZOA; ECHINODERMATA; ECHINOZOA; ECHINOIDEA; EUECHINOIDEA;
OC ECHINACEA; ECHINOIDA; STRONGYLOCENTROTIDAE; STRONGYLOCENTROTUS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 98119758.
RA GINGRAS D., GAGNON C.;
RT "Molecular cloning and characterization of a radial spoke head
protein of sea urchin sperm axonemes: involvement of the protein in
the regulation of sperm motility."
RL MOL. BIOL. CELL 9:513-522(1998).
DR EMBL; U73123; G2905895; -.
SQ SEQUENCE 552 AA; 62723 MW; 898CFCCC CRC32;

Query Match 69.2%; Score 63; DB 5; Length 552;
Best Local Similarity 50.0%; Pred. No. 1.85e-01;
Matches 5; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 270 VCNEPGQPV 279
QY 2 VCADESESQV 11

RESULT 15
ID Q88430 PRELIMINARY; PRT; 92 AA.
AC Q88430;
DT 01-NOV-1998 (TREMBREL. 08, CREATED)



W P E R L H
(TM)

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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm
Run on: Fri Feb 4 17:34:01 2000; Maspar time 5.10 Seconds
Tabular output not generated.

Title: >US-09-150-813-44
Description: (1-12) from US09150813.pep
Perfect Score: 91
Sequence: 1 QVCADPSESQVQ 12
Scoring table: PAM 150
Gap 15
Searched: 179066 seqs, 54579741 residues
Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: sptrembl9
1:sp_archaea 2:sp_bacteria 3:sp_fungi 4:sp_human
5:sp_invertebrate 6:sp_mammal 7:sp_mhc 8:sp_orananelle
9:sp_phase 10:sp_plant 11:sp_rodent 12:sp_unclassified
13:sp_vertebrate 14:sp_virus
Statistics: Mean 25.020; Variance 34.042; scale 0.735
pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description	Pred. No.
1	86	94.5	80	4	Q14745	LD78 ALPHA BETA PRECUR	1.64e-06
2	74	81.3	120	4	O15467	IL-10-INDUCIBLE CHEMOK	8.65e-04
3	73	80.2	95	14	O98158	ORF K6.	1.43e-03
4	70	76.9	133	11	O09002	SMALL INDUCIBLE CYTOKI	6.38e-03
5	70	76.9	133	11	O09006	BETA CHEMOKINE EXODUS-	6.38e-03
6	67	73.6	134	4	O00585	BETA CHEMOKINE EXODUS-	2.76e-02
7	67	73.6	395	11	O35933	FRACTALKINE.	2.76e-02
8	67	73.6	395	11	O35188	NEUTROACTIN.	2.76e-02
9	66	72.5	97	11	O89093	CC CHEMOKINE ST38 PREC	4.47e-02
10	66	72.5	203	14	O67634	ECO Q PROTEIN (FRAGMEN	7.20e-02
11	65	71.4	91	4	O43646	RANTES PRECURSOR.	4.47e-02
12	65	71.4	119	4	O00175	MP1F-2.	7.20e-02
13	64	70.3	95	4	O96664	CHEMOKINE EXODUS.	1.16e-01
14	63	69.2	552	5	O46178	RADIAL SPOKEHEAD.	1.85e-01
15	62	68.1	92	11	O88430	CC CHEMOKINE ABCD-1.	2.94e-01
16	62	68.1	94	14	O98157	VMIP-1b.	2.94e-01
17	62	68.1	96	11	P97884	CC CHEMOKINE EXODUS.	2.94e-01
18	62	68.1	104	13	O73912	K60 PROTEIN PRECURSOR.	2.94e-01
19	61	67.0	93	4	O00626	MACROPHAGE-DERIVED CHE	4.67e-01
20	61	67.0	108	11	O70460	EBI-1 LIGAND CHEMOKINE	4.67e-01

21	61	67.0	109	4	O43927	4.67e-01
22	60	65.9	97	13	O57411	7.38e-01
23	60	65.9	101	13	O93442	7.38e-01
24	59	64.8	397	4	P78423	1.16e+00
25	58	63.7	96	13	O90825	1.82e+00
26	58	63.7	97	6	O62812	1.82e+00
27	58	63.7	252	14	P89687	1.82e+00
28	57	62.6	529	2	O06394	2.83e+00
29	57	62.6	761	11	O08762	2.83e+00
30	56	61.5	350	11	O09132	4.39e+00
31	55	60.4	106	2	O49811	4.39e+00
32	55	60.4	377	3	O60088	6.77e+00
33	54	59.3	549	4	Q14296	6.77e+00
34	53	58.2	109	11	O55038	1.04e+01
35	53	58.2	535	4	O15830	1.59e+01
36	53	58.2	860	14	O93091	1.59e+01
37	53	58.2	949	5	P90956	1.59e+01
38	53	58.2	1032	11	O62780	1.59e+01
39	53	58.2	1840	13	O90831	1.59e+01
40	53	58.2	2180	5	O01768	1.59e+01
41	52	57.1	253	2	Q53582	2.41e+01
42	52	57.1	321	2	O69128	2.41e+01
43	52	57.1	505	4	O15375	2.41e+01
44	52	57.1	1200	2	P73340	2.41e+01
45	52	57.1	1396	5	P90865	2.41e+01

ALIGNMENTS

RESULT 1 PRELIMINARY: PRT; 80 AA.
ID Q14745
AC Q14745;
DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
DT 01-JAN-1999 (TREMBLREL. 09, LAST ANNOTATION UPDATE)
DE LD78 ALPHA BETA PRECURSOR (FRAGMENT).
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
CC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-BRAIN;
RA ISHIZUKA K., IGATA-YI R., NARUSE K., NAKASHIMA H., OHUCHI K.,
RA KATSURAGI S., KIN Y., OHMOTO Y., NOMIYAMA H., IIO M., MIURA R.,
RA MIYAKAWA T.;
RL SUBMITTED (AUG-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; D63785; D1010501;
DR PROSITE; P500472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; 118; 1.
KW SIGNAL.
FT NON_TER 1
FT SIGNAL <1 16 POTENTIAL.
FT CHAIN 17 >80 LD78 ALPHA BETA.
FT NON_TER 80 80
SQ SEQUENCE 80 AA; 8857 MW; 3F87FLC6 CRC32;
Query Match 94.5%; Score 86; DB 4; Length 80;
Best Local Similarity 91.7%; Pred. No. 1.64e-06;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 65 QVCADPSESQVQ 76
Qy 1 QVCADPSESQVQ 12

RESULT 2 PRELIMINARY: PRT; 120 AA.
ID O15467
AC O15467;
DT 01-JAN-1998 (TREMBLREL. 05, CREATED)
DT 01-JAN-1998 (TREMBLREL. 05, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE IL-10-INDUCIBLE CHEMOKINE.
GN ILINCK OR SCYAL6.

RA PARY J.P., PERUZZI D., EDELMAN I.S., CHANG Y., MOORE P.S.;
 RL SUBMITTED (OCT-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [4]
 RP SEQUENCE FROM N.A.
 RA NICHOLAS J., RUVOLO V.R., BURNS W.H., SANDFORD G., WAN X., CIUFFO D.,
 RA HENDRICKSON S., GUO H.G., HAYWARD G.S., REITZ M.S.;
 RL SUBMITTED (NOV-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [5]
 RP SEQUENCE FROM N.A.
 RA RUSSO J.J., BOHENKY R.A., CHIEN M.C., CHEN J., YAN M., MADDALENA D.,
 RA PARY J.P., PERUZZI D., EDELMAN I.S., CHANG Y., MOORE P.S.;
 RL SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [6]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 97296220.
 RA NEPEL F., ALBRECHT J.C., FLECKENSTEIN B.;
 RA "Cell-homologous genes in the Kaposi's sarcoma-associated
 RT rhadinovirus human herpesvirus 8: determinants of its
 RT pathogenicity";
 RL J. VIROL. 71:4187-4192(1997).
 RN [7]
 RP SEQUENCE FROM N.A.
 RA SUN R., LIN S.-F., MILLER G.;
 RL SUBMITTED (SEP-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL: U75698; G1718266; -
 DR EMBL: U74585; G1658273; -
 DR EMBL: U93872; G2246546; -
 DR EMBL: U71366; G3551763; -
 DR PFAM: PF00048; i18; 1.
 KW HYPOTHETICAL PROTEIN.
 SQ SEQUENCE 95 AA; 10485 MW; 5283348D CRC32;

 Query Match 80.2%; Score 73; DB 14; Length 95;
 Best Local Similarity 66.7%; Pred. No. 1.43e-03;
 Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps

 Db 74 QICADPSKNVVR 85
 QY 1 QVCADPSESVMQ 12

 RESULT 4
 ID O09002 PRELIMINARY; PRT; 133 AA.
 AC O09002;
 DT 01-JUL-1997 (TREMBLREL. 04, CREATED)
 DT 01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE SMALL INDUCIBLE CYTOKINE A21 (TCA41).
 OS SCY41.
 GN MUS MUSCULUS (MOUSE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
 OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE-THYMUS;
 RA TANABE S., LU Z., LUO Y., QUACKENBUSH E.J., BERMAN M.A.,
 RA COLLINS-RACIE L.A., MI S., REILLY C., LO D., JACOBS K.A., DORF M.E.;
 RL SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 97400322.
 RA HEDRICK J.A., ZLOTNIK A.;
 RA "Identification and characterization of a novel beta chemokine
 RT containing six conserved cysteines";
 RL J. IMMUNOL. 159:1589-1593(1997).
 RN [3]
 RP SEQUENCE FROM N.A.
 RA HEDRICK J.A., ZLOTNIK A.;
 RL SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL: AF006637; G2209189; -
 DR EMBL: AF001980; G2624927; -
 DR MGD: MGI:1097677; SCYA21.
 DR PFAM: PF00048; i18; 1.

US-09-150-813-44.rspt

Sat Feb 5 12:04:34 2000

SQ SEQUENCE 133 AA; 14558 MW; C0532523 CRC32;
 Query Match 76.9%; Score 70; DB 11; Length 133;
 Best Local Similarity 58.3%; Pred. No. 6.38e-03;
 Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;
 Db 73 ELCANPEGWVQ 84
 Qy 1 QVCADPSESQVQ 12
 RESULT 5 PRELIMINARY; PRT; 133 AA.
 ID O09006
 AC O09006;
 DT 01-JUL-1997 (TREMREL. 04, CREATED)
 DT 01-AUG-1998 (TREMREL. 07, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
 DE BETA CHEMOKINE EXODUS-2.
 GN SCY21.
 OS MUS MUSCULUS (MOUSE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
 OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
 RN SEQUENCE FROM N.A.
 RP TISSUE-TOTAL FETUS;
 RC MEDLINE: 97444139.
 RA HROMAS R.A.; KLEMSZ M., KRATHWOHL M., FIFE K., COOPER S.,
 RA SCHNITZLEIN-BICK C., BROXMEYER H.E., a novel C-C chemokine
 RA "Isolation and characterization of Exodus-2, a novel C-C chemokine
 RT with a unique 37-amino acid carboxyl-terminal extension.";
 RL J. IMMUNOL. 159:2554-2558(1997).
 RN SEQUENCE FROM N.A.
 RP TISSUE-TOTAL FETUS;
 RC HROMAS R.A.;
 RL SUBMITTED (JUN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL: U88322; G3169697;
 DR MGD: MGI:1097677; SCY21.
 DR PFAM: PF00048; i18; 1.
 SQ SEQUENCE 133 AA; 14600 MW; B34A5E22 CRC32;
 Query Match 76.9%; Score 70; DB 11; Length 133;
 Best Local Similarity 58.3%; Pred. No. 6.38e-03;
 Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;
 Db 73 ELCANPEGWVQ 84
 Qy 1 QVCADPSESQVQ 12
 RESULT 6 PRELIMINARY; PRT; 134 AA.
 ID O00585
 AC O00585;
 DT 01-JUL-1997 (TREMREL. 04, CREATED)
 DT 01-JUL-1997 (TREMREL. 04, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
 DE BETA CHEMOKINE EXODUS-2.
 OS HOMO SAPIENS (HUMAN)
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
 OC CATARRHINI; HOMINIDAE; HOMO.
 RN SEQUENCE FROM N.A.
 RP HROMAS R.A.; GRAY P., KLEMSZ M., FIFE K., BROXMEYER H.;
 RL SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN SEQUENCE FROM N.A.
 RP MEDLINE: 97400322.
 RA HEDRICK J.A., ZLOTNIK A.;
 RT "Identification and characterization of a novel beta chemokine,
 RT containing six conserved cysteines.";
 RL J. IMMUNOL. 159:1589-1593(1997).
 RN SEQUENCE FROM N.A.
 RP

RA HEDRICK J.A., ZLOTNIK A.;
 RL SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN SEQUENCE FROM N.A.
 RP NAGIRA M., IMAI T., HIESHIMA K., KUSUDA J., RIDANPAA M., TAKAGI S.,
 RA NISHIMURA M., KATZAKI M., NOMIYAMA H., YOSHIE O.;
 RL SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL: U88320; G2196920;
 DR EMBL: AF001979; G2624925;
 DR EMBL: AB002409; D1022673;
 DR PFAM: PF00048; i18; 1.
 SQ SEQUENCE 134 AA; 14646 MW; FE86A239 CRC32;
 Query Match 73.6%; Score 67; DB 4; Length 134;
 Best Local Similarity 66.7%; Pred. No. 2.76e-02;
 Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;
 Db 73 ELCADPKRELWVQ 84
 Qy 1 QVCADPSESQVQ 12
 RESULT 7 PRELIMINARY; PRT; 395 AA.
 ID O35933
 AC O35933;
 DT 01-JAN-1998 (TREMREL. 05, CREATED)
 DT 01-JAN-1998 (TREMREL. 05, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
 DE FRACTALKINE.
 OS MUS MUSCULUS (MOUSE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
 OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
 RN SEQUENCE FROM N.A.
 RP STRAIN=BALB/C; TISSUE=BRAIN;
 RA ROSSI D., HARDIMAN G., COPELAND N., GILBERT D.J., JENKINS N.,
 RA ZLOTNIK A., BAZAN J.F.;
 RL SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL: U92565; G2459677;
 DR PFAM: PF00048; i18; 1.
 SQ SEQUENCE 395 AA; 42040 MW; 3997A113 CRC32;
 Query Match 73.6%; Score 67; DB 11; Length 395;
 Best Local Similarity 80.0%; Pred. No. 2.76e-02;
 Matches 8; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
 Db 74 CADPKRELWVQ 83
 Qy 3 CADPSESQVQ 12
 RESULT 8 PRELIMINARY; PRT; 395 AA.
 ID O35188
 AC O35188;
 DT 01-JAN-1998 (TREMREL. 05, CREATED)
 DT 01-JAN-1998 (TREMREL. 05, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
 DE NEUROTACTIN.
 GN SCYD1.
 OS MUS MUSCULUS (MOUSE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
 OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
 RN SEQUENCE FROM N.A.
 RP MEDLINE: 97320499.
 RA PAN Y., CLARE L., HONG Z., DOLICH S., DEEDS J., GONZALO J., VATH J.,
 RA GOSSELIN M., MA J., DUSSAULT B., WOOLF B., ALPERIN A., CULPEPPER J.,
 RA GUTIERREZ-RAMOS J.C., GEARING D.;
 RT "Neurotactin, a membrane-anchored chemokine upregulated in brain
 RT inflammation.";
 RL NATURE 387:611-617(1997).
 DR EMBL: AF010586; G2317698;
 DR MGD: MGI:1097153; SCYD1.

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DR PFAM: PF00048; i18; 1.
SQ SEQUENCE 395 AA; 42098 MW; E3CD0612 CRC32;

Query Match
Best Local Similarity 80.0%; Score 67; DB 11; Length 395;
Matches 8; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Db 74 CADPKKQVQ 83
|||||:||||
QY 3 CADPSESQVQ 12

RESULT 9
ID O89093 PRELIMINARY; PRT; 97 AA.
AC O89093:
DT 01-NOV-1998 (TREMBLREL. 08, CREATED)
DT 01-NOV-1998 (TREMBLREL. 08, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST SEQUENCE UPDATE)
DE CC CHEMOKINE ST38 PRECURSOR.
DE LARC.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
OC SCIUROGNATHI; MURIDAE; MORINAE; MUS.
RN [1]
RA UTANS-SCHNEITZ U., LOREZ H., KLINKERT W.E.F., DA SILVA J.,
RA LESSLAUER W.;
RT "A novel rat CC chemokine, identified by targeted differential
RT display, is upregulated in brain inflammation.";
RL J. NEUROIMMUNOL. 0:0-0(1998).
RN [2]
RP SEQUENCE FROM N.A.
RA VILLARES R.;
RL SUBMITTED (JUL-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL: AF053313; G3551819; -
DR EMBL: AJ007862; E1312757; -
KW SIGNAL.
FT SIGNAL 1 27 POTENTIAL.
FT CHAIN 28 97 CC CHEMOKINE ST38.
SQ SEQUENCE 97 AA; 10826 MW; 053405BD CRC32;

Query Match
Best Local Similarity 72.5%; Score 66; DB 11; Length 97;
Matches 7; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 74 VCADPKQNV 83
|||||:||||
QY 2 VCADPSESQV 11

RESULT 10
ID Q67634 PRELIMINARY; PRT; 203 AA.
AC Q67634:
DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
DE ECO Q PROTEIN (FRAGMENT)
DE GALLII HERPESVIRUS TYPE 1.
OS VIRUSES; DSDNA VIRUSES, NO RNA STAGE; HERPESVIRIDAE;
OC ALPHAHERPESVIRINAE; VARICELLOVIRUS.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN-GA.
RX MEDLINE: 96074534.
RA PENG Q., ZENG M., BHUIYAN Z.A., UBUKATA E., TANAKA A., NONOVAMA M.,
RA SHIRAZI Y.;
RT "Isolation and characterization of Marek's disease virus (MDV) cDNAs
RT mapping to the BamHI-12, BamHI-02, and BamHI-L fragments of the MDV
RT genome from lymphoblastoid cells transformed and persistently
RL infected with MDV.";
RL VIROLOGY 213:590-599(1995).
DR EMBL: U34966; G1185444; -
DR PFAM: PF00048; i18; 1.

US-09-150-813-44.rspt

ET NON_TER 1
SQ SEQUENCE 203 AA; 23132 MW; 887D04C3 CRC32;

Query Match
Best Local Similarity 72.5%; Score 66; DB 14; Length 203;
Matches 7; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Db 145 VCYDPEAPVQ 155
|||||:||||
QY 2 VCADPSESQVQ 12

RESULT 11
ID O43646 PRELIMINARY; PRT; 91 AA.
AC O43646:
DT 01-JUN-1998 (TREMBLREL. 06, CREATED)
DT 01-JUN-1998 (TREMBLREL. 06, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE RANTES PRECURSOR.
DE SCYA5.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RA JANG J.S., KIM B.E.;
RL SUBMITTED (JAN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [2]
RP SEQUENCE FROM N.A.
RA NOMIYAMA H.;
RT "Structure of a region of 181 kb containing five CC chemokine
RT genes";
RL SUBMITTED (AUG-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL: AF043341; G2905632; -
DR EMBL: AF088219; G3719366; -
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
KW SIGNAL.
FT SIGNAL 1 23 POTENTIAL.
FT CHAIN 24 91 RANTES.
SQ SEQUENCE 91 AA; 9990 MW; CF404FAD CRC32;

Query Match
Best Local Similarity 71.4%; Score 65; DB 4; Length 91;
Matches 7; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Db 71 QVCANPEKKWVR 82
|||||:||||
QY 1 QVCADPSESQVQ 12

RESULT 12
ID O00175 PRELIMINARY; PRT; 119 AA.
AC O00175:
DT 01-JUL-1997 (TREMBLREL. 04, CREATED)
DT 01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE MTF-2.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RA PATEL V.P., KREIDER B.L., LI Y., LI H., LEUNG K., SALCEDO T.,
RA NARDELLI B., FIPPALLA V., GENTZ S., THOTAKURA R., PAMELEE D.,
RA GENTZ R., GAROTTA G.;
RL J. EXP. MED. 0:0-0(0).
DR EMBL: U85768; G1916252; -
DR PFAM: PF00048; i18; 1.
SQ SEQUENCE 119 AA; 13119 MW; CDF526F0 CRC32;

Query Match
Best Local Similarity 71.4%; Score 65; DB 4; Length 119;
Matches 7; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

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Db 72 QFCGPKQSWQ 83
 QY 1 QVCADPSESQW 12

RESULT 13
 ID Q99664 PRELIMINARY; PRT; 95 AA.
 AC Q99664;
 DT 01-MAY-1997 (TREMBREL. 03, CREATED)
 DT 01-MAY-1997 (TREMBREL. 03, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBREL. 08, LAST ANNOTATION UPDATE)
 DE CHEMOKINE EXODUS.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
 OC CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=PANCREAS;
 RX MEDLINE; 97275143.
 RA HROMAS R., GRAY P.W., CHANTRY D., GODISKA R., KRATHWOHL M., FIFE K.,
 RA BELL G.I., TAKEDA J., ARONICA S., GORDON M., COOPER S.,
 RA BROXMEYER H.E., KLEMSZ M.J.;
 RA "Cloning and characterization of exodus, a novel beta-chemokine."
 RT BLOOD 89:3315-3322(1997).
 RL EMBL; U64197; GI778717; -.
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 DR PFAM; PF00048; i18; 1.
 SQ SEQUENCE 95 AA; 10691 MW; 1526B4C0 CRC32;

Query Match 70.3%; Score 64; DB 4; Length 95;
 Best Local Similarity 60.0%; Pred. No. 1.16e-01;
 Matches 6; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 72 VCANPKQWV 81
 QY 2 VCAPDSESQW 11

RESULT 14
 ID O46178 PRELIMINARY; PRT; 552 AA.
 AC O46178;
 DT 01-JUN-1998 (TREMBREL. 06, CREATED)
 DT 01-JUN-1998 (TREMBREL. 06, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBREL. 08, LAST ANNOTATION UPDATE)
 DE RADIAL SPOKEHEAD.
 OS STRONGYLOCENTROTUS PURPURATUS (PURPLE SEA URCHIN).
 OC EUKARYOTA; METAZOA; ECHINODERMATA; ECHINOZOA; ECHINOIDEA; EUECHINOIDEA;
 OC ECHINACEA; ECHINOIDA; STRONGYLOCENTROTIDAE; STRONGYLOCENTROTUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 98119758.
 RA GINGRAS D., GAGNON C.;
 RA "Molecular cloning and characterization of a radial spoke head
 protein of sea urchin sperm axonemes: involvement of the protein in
 the regulation of sperm motility."
 RT MOL. BIOL. CELL 9:513-522(1998).
 RL EMBL; U73123; G2905895; -.
 DR EMBL; U73123; G2905895; -.
 SQ SEQUENCE 552 AA; 62723 MW; 898CFCCC CRC32;

Query Match 69.2%; Score 63; DB 5; Length 552;
 Best Local Similarity 50.0%; Pred. No. 1.85e-01;
 Matches 5; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 270 VCNBPQWV 279
 QY 2 VCAPDSESQW 11

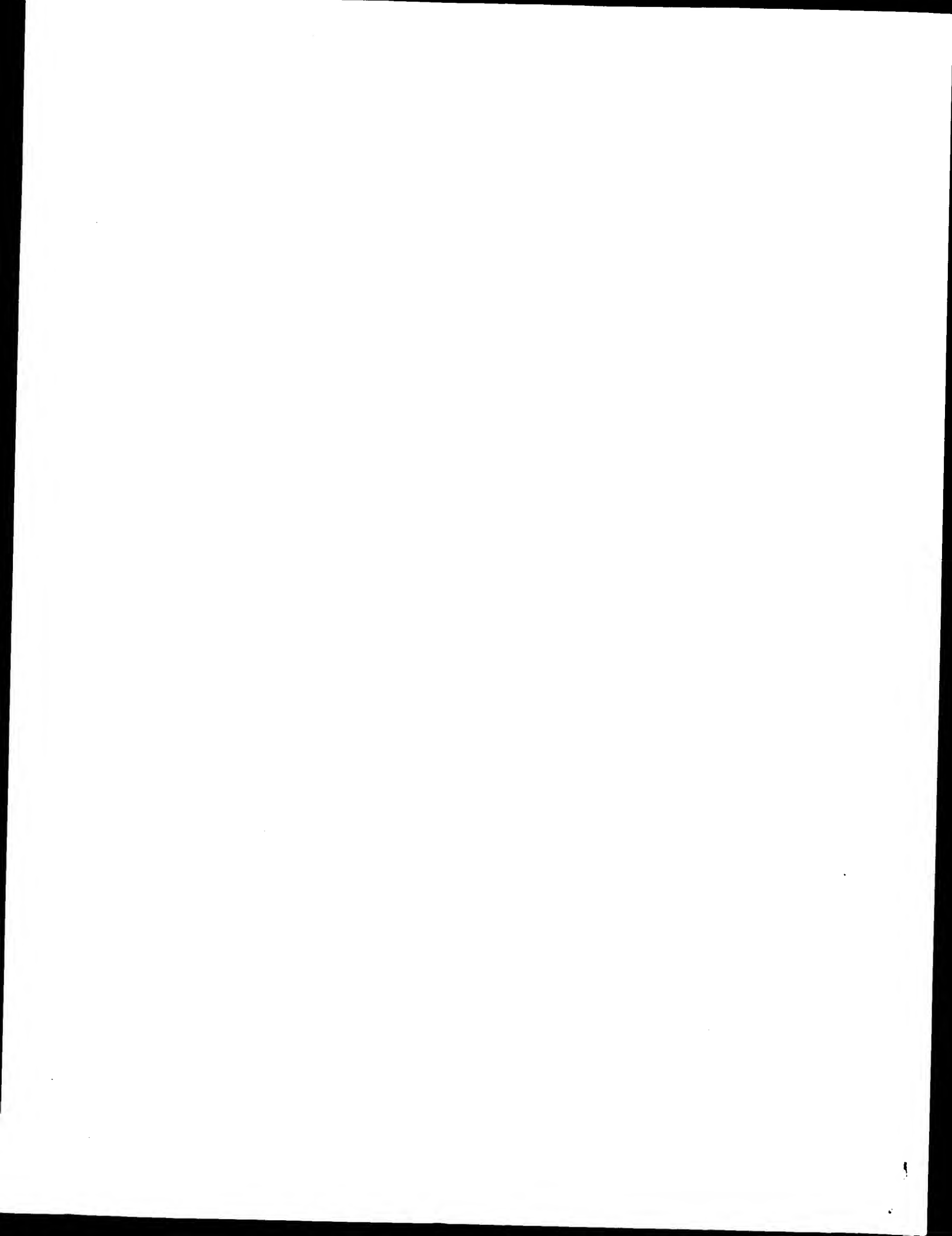
RESULT 15
 ID O88430 PRELIMINARY; PRT; 92 AA.
 AC O88430;
 DT 01-NOV-1998 (TREMBREL. 08, CREATED)

DT 01-NOV-1998 (TREMBREL. 08, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBREL. 08, LAST ANNOTATION UPDATE)
 DE CC CHEMOKINE ABCD-1.
 OS MUS MUSCULUS (MOUSE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
 OC SCIUROGNATHI; MURIDAE; MORINAE; MUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=LIVER;
 RX MEDLINE; 98353531.
 RA SCHANIEL C., PARDALI E., SALLUSTO F., SPELETAS M., RUEDL C.,
 RA SHIMIZU T., SEIDL T., ANDERSSON J., MELCHERS F., ROLINK A.G.,
 RA SIDERAS P.;
 RA "Activated murine B lymphocytes and dendritic cells produce a novel
 CC chemokine which acts selectively on activated T cells."
 RT J. EXP. MED. 188:451-463(1998).
 RL EMBL; AF052505; G3378116; -.
 DR EMBL; AF052505; G3378116; -.
 SQ SEQUENCE 92 AA; 10302 MW; BC7219A0 CRC32;

Query Match 68.1%; Score 62; DB 11; Length 92;
 Best Local Similarity 54.5%; Pred. No. 2.94e-01;
 Matches 6; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 74 DICADPRQWV 84
 QY 1 QVCADPSESQW 11

Search completed: Fri Feb 4 17:35:01 2000
 Job time : 60 secs.



(TM)

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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 17:39:54 2000; MasPar time 5.06 Seconds
129.377 Million cell updates/sec

Tabular output not generated.

Title: >US-09-150-813-65
(1-12) from US09150813.pep

Perfect Score: 96

Sequence: 1 ETCADPKKWKVQ 12

Scoring table: PAM 150

Gap 15

Searched: 179066 seqs, 54579741 residues

Post-processing: Minimum Match 0%

Listing first 45 summaries

Database:

sptrembl9

1:sp_archaea 2:sp_bacteria 3:sp_fungi 4:sp_human

5:sp_invertebrate 6:sp_mammal 7:sp_mhc 8:sp_organelle

9:sp_phase 10:sp_plant 11:sp_rodent 12:sp_unclassified

13:sp_vertebrate 14:sp_virus

Statistics: Mean 25.653; Variance 35.991; scale 0.713

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description	Pred. No.
1	84	87.5	395	11	NEUROTACTIN.	1.61e-05
2	84	87.5	395	11	FRACTALKINE.	1.61e-05
3	79	82.3	134	4	BETA CHEMOKINE EXODUS-	2.02e-04
4	75	78.1	80	4	LD78 ALPHA BETA PRECUR	1.46e-03
5	74	77.1	120	4	IL-10-INDUCIBLE CHEMOK	2.37e-03
6	73	76.0	119	4	MP1F-2.	3.84e-03
7	72	75.0	97	11	CC CHEMOKINE ST38 PREC	6.22e-03
8	71	74.0	92	11	CC CHEMOKINE ABCD-1.	1.00e-02
9	70	72.9	397	4	CX3C CHEMOKINE PRECURS	2.58e-02
10	69	71.9	97	13	LYMPHOTACTIN PRECURS	2.58e-02
11	69	71.9	133	11	BETA CHEMOKINE EXODUS	4.12e-02
12	69	71.9	133	11	SMALL INDUCIBLE CYTOKI	4.12e-02
13	68	70.8	85	4	CHEMOKINE EXODUS.	4.12e-02
14	68	70.8	96	11	INTERLEUKIN-8 (FRAGMEN	4.12e-02
15	68	70.8	109	11	B LYPHOCYTE CHEMOATTR	6.55e-02
16	67	69.8	91	4	RANTES PRECURSOR.	6.55e-02
17	67	69.8	93	4	MACROPHAGE-DERIVED CHE	6.55e-02
18	67	69.8	101	13	CC CHEMOKINE-1.	1.04e-01
19	67	69.8	95	14	ORF K6.	
20	66	68.8	95	14	Q98158	

21	66	68.8	760	3	Q99126	CHITIN SYNTHETASE I.	1.04e-01
22	61	63.5	109	4	Q43927	CXC CHEMOKINE PRECURSOR	9.82e-01
23	60	62.5	203	14	Q67634	ECO Q PROTEIN (FRAGMEN	1.52e+00
24	60	62.5	859	14	Q97013	ENVELOPE GLYCOPROTEIN	1.52e+00
25	59	61.5	522	5	O61090	SERINE RICH PROTEIN HO	2.34e+00
26	57	59.4	104	13	Q73912	K60 PROTEIN PRECURSOR.	5.49e+00
27	57	59.4	178	2	O31562	YF1T PROTEIN.	5.49e+00
28	57	59.4	475	4	O60646	HYPOTHETICAL 53.8 KD P	5.49e+00
29	57	59.4	2276	4	Q75050	KIAA0462 PROTEIN (FRAG	5.49e+00
30	56	58.3	928	2	O86395	NP47 PROTEIN.	8.34e+00
31	56	58.3	1224	5	P91309	CODED FOR BY C. ELEGAN	8.34e+00
32	56	58.3	26926	4	Q10466	TITIN HEART ISOFORM N	8.34e+00
33	55	57.3	95	14	Q75362	ENVELOPE GLYCOPROTEIN	1.26e+01
34	55	57.3	100	14	O40501	ENVELOPE GLYCOPROTEIN	1.26e+01
35	55	57.3	187	2	O83516	HYPOTHETICAL 21.4 KD P	1.26e+01
36	55	57.3	363	7	Q95394	MHC CLASS 1 PROTEIN MO	1.26e+01
37	55	57.3	389	1	O58409	389AA LONG HYPOTHETICA	1.26e+01
38	55	57.3	399	14	O68409	ORF UL154.	1.26e+01
39	55	57.3	854	14	Q97016	ENVELOPE GLYCOPROTEIN	1.26e+01
40	55	57.3	854	14	Q97016	ENVELOPE GLYCOPROTEIN	1.26e+01
41	54	56.3	306	5	O23084	COSMID ZC8	1.90e+01
42	54	56.3	922	5	Q93290	C27D8.3 PROTEIN.	1.90e+01
43	54	56.3	1053	2	O84834	RIBONUCLEOSIDE REDUCTA	1.90e+01
44	54	56.3	1396	5	P90865	T24B8.7 PROTEIN.	1.90e+01
45	53	55.2	202	14	O89996	ENVELOPE GLYCOPROTEIN	2.84e+01

ALIGNMENTS

RESULT 1	PRELIMINARY;	PRT;	395 AA.
ID O35188			
AC O35188;			
DT 01-JAN-1998 (TREMBLREL. 05, CREATED)			
DT 01-JAN-1998 (TREMBLREL. 05, LAST SEQUENCE UPDATE)			
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)			
DE NEUROTACTIN.			
GN SCYD1.			
OS MUS MUSCULUS (MOUSE).			
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;			
OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.			
RN [1]			
RP SEQUENCE FROM N.A.			
RX MEDLINE; 97320499.			
RA PAN Y., CLARE L., HONG Z., DOLICH S., DEEDS J., GONZALO J., VATH J.,			
RA GOSSELIN M., MA J., DUSSAULT B., WOOLF B., ALPERIN A., CULPEPPER J.,			
RA GUTIERREZ-RAMOS J.C., GEARING D.;			
RT "Neurotactin, a membrane-anchored chemokine upregulated in brain			
RT inflammation.";			
RL NATURE 387:611-617(1997).			
DR EMBL; AF010586; G2317698; -			
DR MGD; MGI:1097153; SCYD1.			
DR PFAM; PF00048; i18; 1.			
DR SEQUENCE 395 AA; 42098 MW; E3CD0612 CRC32;			
Query Match 87.5%; Score 84; DB 11; Length 395;			
Best Local Similarity 90.9%; Pred. No. 1.61e-05;			
Matches 10; Conservative 1; Mismatches 0; Indels 0; Gaps 0;			
Db 73 FCADPKKWKVQ 83			
QY 2 ICADPKKWKVQ 12			
RESULT 2			
ID O35933			
AC O35933;			
DT 01-JAN-1998 (TREMBLREL. 05, CREATED)			
DT 01-JAN-1998 (TREMBLREL. 05, LAST SEQUENCE UPDATE)			
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)			
DE FRACTALKINE.			
OS MUS MUSCULUS (MOUSE).			
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;			
OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.			

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RP RP SEQUENCE FROM N.A.
RC STRAIN=BALB/C; TISSUE=BRAIN;
RA ROSSI D., HARDIN G., COPELAND N., GILBERT D.J., JENKINS N.,
RA ZLOTNIK A., BAZAN J.F.;
RL SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; U92565; G2459677; -
DR PFAM; PF00048; i18; 1.
SQ SEQUENCE 395 AA; 42040 MW; 3997A113 CRC32;

Query Match
Best Local Similarity 87.5%; Score 84; DB 11; Length 395;
Matches 10; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 73 FCADPKKWKVQ 83
QY 2 ICADPKKWKVQ 12

RESULT 3
ID C00585; PRELIMINARY; PRT; 134 AA.
AC C00585;
DT 01-JUL-1997 (TREMELREL. 04, CREATED)
DT 01-JUL-1997 (TREMELREL. 04, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMELREL. 08, LAST ANNOTATION UPDATE)
DE BETA CHEMOKINE EXODUS-2.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RA HROMAS R.A., GRAY P., KLEMSZ M., FIFE K., BROXMEYER H.;
RL SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE; 97400322.
RA HEDRICK J.A., ZLOTNIK A.;
RT "Identification and characterization of a novel beta chemokine
containing six conserved cysteines.";
RL J. IMMUNOL. 159:1589-1593(1997).
RN [3]
RP SEQUENCE FROM N.A.
RA HEDRICK J.A., ZLOTNIK A.;
RL SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [4]
RP SEQUENCE FROM N.A.
RA NAGIRA M., IMAI T., HIESHIMA K., KUSUDA J., RIDANPAA M., TAKAGI S.,
RA NISHIMURA M., KAKIZAKI M., NOMIYAMA H., YOSHIE O.;
RL SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; U88320; G2196920; -
DR EMBL; AF001979; G2624925; -
DR EMBL; AB002409; D1022673; -
DR PFAM; PF00048; i18; 1.
SQ SEQUENCE 134 AA; 14646 MW; FE86A239 CRC32;

Query Match
Best Local Similarity 82.3%; Score 79; DB 4; Length 134;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 73 ELCAADPKELWVQ 84
QY 1 EICADPKKWKVQ 12

RESULT 4
ID Q14745; PRELIMINARY; PRT; 80 AA.
AC Q14745;
DT 01-NOV-1996 (TREMELREL. 01, CREATED)
DT 01-NOV-1996 (TREMELREL. 01, LAST SEQUENCE UPDATE)
DT 01-JAN-1999 (TREMELREL. 09, LAST ANNOTATION UPDATE)
DE LD78 ALPHA BETA PRECURSOR (FRAGMENT).
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;

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OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=BRAIN;
RA ISHIZUKA K., IGATA-YI R., NARUSE K., NAKASHIMA H., OHUCHI K.,
RA KATSURAGI S., KIN Y., OHMOTO Y., NOMIYAMA H., IIO M., MIURA R.,
RA MIYAKAWA T.;
RL SUBMITTED (AUG-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; D63785; D1010501; -
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; i18; 1.
KW SIGNAL.
FT NON_TER 1 1
FT SIGNAL <1 16 POTENTIAL.
FT CHAIN 17 >80 LD78 ALPHA BETA.
FT NON_TER 80 80
SQ SEQUENCE 80 AA; 8857 MW; 3F87F1C6 CRC32;

Query Match
Best Local Similarity 78.1%; Score 75; DB 4; Length 80;
Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 65 QVCADPSEEWVQ 76
QY 1 EICADPKKWKVQ 12

RESULT 5
ID Q15467; PRELIMINARY; PRT; 120 AA.
AC Q15467;
DT 01-JAN-1998 (TREMELREL. 05, CREATED)
DT 01-JAN-1998 (TREMELREL. 05, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMELREL. 08, LAST ANNOTATION UPDATE)
DE IL-10-INDUCIBLE CHEMOKINE.
GN ILINCK OR SCYAL6.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RA HEDRICK J.A., HELMS A., GORMAN D., ZLOTNIK A.;
RL SUBMITTED (NOV-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=LIVER;
RA SHOUJAI K., HIESHIMA K., FUKUDA S., IIO M., MIURA R., IMAI T.,
RA YOSHIE O., NOMIYAMA H.;
RL BIOCHIM. BIOPHYS. ACTA 0:0-0(1998).
RN [3]
RP SEQUENCE FROM N.A.
RA NOMIYAMA H.;
RT "Structure of a region of 181 kb containing five CC chemokine
genes.";
RL SUBMITTED (AUG-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [4]
RP SEQUENCE FROM N.A.
RX MEDLINE; 98308096.
RA YOUN B.S., ZHANG S., BROXMEYER H.E., ANTOL K., FRASER M.J. JR.,
RA HANGOC G., KWON B.S.;
RT "Isolation and characterization of LMC, a novel lymphocyte and
monocyte chemoattractant human CC chemokine, with myelosuppressive
RT activity.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 247:217-222(1998).
DR EMBL; U91746; G2581781; -
DR EMBL; AB007454; D1024963; -
DR EMBL; AF088219; G3719365; -
DR EMBL; AF055467; G3395776; -
DR PFAM; PF00048; i18; 1.
KW SIGNAL.
SQ SEQUENCE 120 AA; 13600 MW; A079DF66 CRC32;

Query Match
Best Local Similarity 77.1%; Score 74; DB 4; Length 120;
Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

```

Matches 6; Conservative 5; Mismatches 1; Indels 0; Gaps 0;

Db 74 EVCTNPDDVWQ 85
1 EICADPKKQVQ 12

RESULT 6 PRELIMINARY; PRT; 119 AA.

ID 000175
AC 000175;
DT 01-JUL-1997 (TREMREL. 04, CREATED)
DT 01-JUL-1997 (TREMREL. 04, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
DE MP1F-2.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN SEQUENCE FROM N.A.
RP PATEL V.P., KREIDER B.L., LI Y., LI H., LEUNG K., SALCEDO T.,
RA NARDELLI B., PIPPALLA V., GENTZ S., THOTAKURA R., PARMELEE D.,
RA GENTZ R., GAROTTA G.;
RL J. EXP. MED. 0:0-0(0).
DR EMBL: U95768; G1916252; -.
DR PFAM: PF00048; i18: 1.
SQ SEQUENCE 119 AA; 13119 MW; CDF526F0 CRC32;

Query Match 76.08; Score 73; DB 4; Length 119;
Best Local Similarity 58.3%; Pred. No. 3.84e-03;
Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 72 QFCGDPKQEWVQ 83
1 EICADPKKQVQ 12

RESULT 7 PRELIMINARY; PRT; 97 AA.

ID 089093
AC 089093;
DT 01-NOV-1998 (TREMREL. 08, CREATED)
DT 01-NOV-1998 (TREMREL. 08, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
DE CC CHEMOKINE ST38 PRECURSOR.
GN LARC.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN SEQUENCE FROM N.A.
RP UTANS-SCHNEITZ U., LOREZ H., KLINKERT W.E.F., DA SILVA J.,
RA LESSLAUER W.;
RT "A novel rat CC chemokine, identified by targeted differential display, is upregulated in brain inflammation.;
RL J. NEUROIMMUNOL. 0:0-0(1998).
RN SEQUENCE FROM N.A.
RP VILLARES R.;
RL SUBMITTED (JUL-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL: AF053313; G3551619; -.
DR EMBL: AJ007862; E1312757; -.
KW SIGNAL.
FT SIGNAL.
FT CHAIN 28 97
SQ SEQUENCE 97 AA; 10836 MW; 053405BD CRC32;

Query Match 75.0%; Score 72; DB 11; Length 97;
Best Local Similarity 70.0%; Pred. No. 6.22e-03;
Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 74 VCADPKQVW 83
2 ICADPKKQV 11

RESULT 8 PRELIMINARY; PRT; 92 AA.

ID 088430
AC 088430;
DT 01-NOV-1998 (TREMREL. 08, CREATED)
DT 01-NOV-1998 (TREMREL. 08, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
DE CC CHEMOKINE ABCD-1.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN SEQUENCE FROM N.A.
RP TISSUE-LIVER;
RC MEDLINE: 98353531.
RA SCHANIEL C., PARDALI E., SALLUSTO F., SPELETAS M., RUDEL C.,
RA SHIMIZU T., SEIDL T., ANDERSSON J., MELCHERS F., ROLINK A.G.,
RA SIDERAS P.;
RT "Activated murine B lymphocytes and dendritic cells produce a novel
CC chemokine which acts selectively on activated T cells.;
RL J. EXP. MED. 188:451-463(1998).
DR EMBL: AF052505; G3378116; -.
SQ SEQUENCE 92 AA; 10302 MW; BC7219A0 CRC32;

Query Match 74.0%; Score 71; DB 11; Length 92;
Best Local Similarity 63.6%; Pred. No. 1.00e-02;
Matches 7; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 74 DICADPROVWV 84
1 EICADPKKQV 11

RESULT 9 PRELIMINARY; PRT; 397 AA.

ID P78423
AC P78423; 000672;
DT 01-MAY-1997 (TREMREL. 03, CREATED)
DT 01-MAY-1997 (TREMREL. 03, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
DE CC CHEMOKINE PRECURSOR.
GN A-152E5.2.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN SEQUENCE FROM N.A.
RP MEDLINE: 9717111.
RA BAZAN J.F., BACON K.B., HARDIMAN G., WANG W., SOO K., ROSSI D.,
RA GREAVES D.R., ZLOTNIK A., SCHALL T.J.;
RT "A new class of membrane-bound chemokine with a CX3C motif.;
RL NATURE 385:640-644(1997).
RN SEQUENCE FROM N.A.
RP ADAMS M.D., LOFTUS B.J., ZHOU L., CROSBY M., FUHRMANN J., MASON T.M.,
RA BRANDON R., KIM U.J., KERLAVAGE A.R., VENTER J.C.;
RT "Homo sapiens Chromosome 16 BAC clone CIT987SK-A-152E5.;
RL SUBMITTED (JUN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL: U91835; G1899259; -.
DR EMBL: U84487; G1888523; -.
DR EMBL: AC004382; G3252821; -.
DR PFAM: PF00048; i18: 1.
KW SIGNAL.
FT SIGNAL 1 24
FT CHAIN 25 397
SQ SEQUENCE 397 AA; 42202 MW; C8093D7D CRC32;

Query Match 72.9%; Score 70; DB 4; Length 397;
Best Local Similarity 80.0%; Pred. No. 1.61e-02;
Matches 8; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 73 FCADPKQVW 82
2 ICADPKKQV 11

RESULT 10
ID O57411 PRELIMINARY; PRT; 97 AA.
AC O57411;
DT 01-JUN-1998 (TREMREL. 06, CREATED)
DT 01-JUN-1998 (TREMREL. 06, LAST SEQUENCE UPDATE)
DE LYPHOTACTIN PRECURSOR.
OS GALLUS GALLUS (CHICKEN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; ARCHOSAURIA; AVES;
OC NEOGNATHAE; GALLIFORMES; PHASIANIDAE; PHASIANINAE; GALLUS.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=SPLEEN;
RA ROSSI D.L., BAZAN J.F., ZLOTNIK A.;
RL SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL: AF006742; G2827882; -.
KW SIGNAL.
FT CHAIN 1 24 POTENTIAL.
FT CHAIN 25 97 LYMPHOTACTIN.
SQ SEQUENCE 97 AA; 11131 MW; 3290101C CRC32;

Query Match 71.9%; Score 69; DB 13; Length 97;
Best Local Similarity 63.8%; Pred. No. 2.58e-02;
Matches 7; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Db 72 ICVHPQKQWQ 82
QY 2 ICADPKKQWQ 12

RESULT 11
ID O09006 PRELIMINARY; PRT; 133 AA.
AC O09006;
DT 01-JUL-1997 (TREMREL. 04, CREATED)
DT 01-AUG-1998 (TREMREL. 07, LAST SEQUENCE UPDATE)
DE 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
DE BETA CHEMOKINE EXODUS-2.
OS SCYA21.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
OC SCUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-TOTAL FETUS;
RX MEDLINE; 97444139.
RA HROMAS R., KIM C.H., KLEMSZ M., KRATHWOHL M., FIFE K., COOPER S.,
RA SCHNITZLEIN-BICK C., BROXMEYER H.E.;
RT "Isolation and characterization of Exodus-2, a novel C-C chemokine
with a unique 3'-amino acid carboxyl-terminal extension.";
RL J. IMMUNOL. 159:2554-2558(1997).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE-TOTAL FETUS;
RA HROMAS R.A.;
RL SUBMITTED (JUN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL: U88322; G3169697; -.
DR MGD; MGI:1097677; SCYA21.
DR PFAM; PF00048; i18; 1.
SQ SEQUENCE 133 AA; 14600 MW; B34A5E22 CRC32;

Query Match 71.9%; Score 69; DB 11; Length 133;
Best Local Similarity 66.7%; Pred. No. 2.58e-02;
Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 73 ELCANPEEGWQ 84
QY 1 EICADPKKQWQ 12

RESULT 12
ID O09002 PRELIMINARY; PRT; 133 AA.

AC O09002;
DT 01-JUL-1997 (TREMREL. 04, CREATED)
DT 01-JUL-1997 (TREMREL. 04, LAST SEQUENCE UPDATE)
DE 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
DE SMALL INDUCIBLE CYTOKINE A21 (TCA4).
GN SCYA21.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
OC SCUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=THYMUS;
RA TANABE S., LU Z., LUO Y., QUACKENBUSH E.J., BERMAN M.A.,
RA COLLINS-RACIE L.A., MI S., REILLY C., LO D., JACOBS K.A., DORF M.E.;
RL SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE; 97400322.
RA HEDRICK J.A., ZLOTNIK A.;
RT "Identification and characterization of a novel beta chemokine
containing six conserved cysteines.";
RL J. IMMUNOL. 159:1589-1593(1997).
RN [3]
RP SEQUENCE FROM N.A.
RA HEDRICK J.A., ZLOTNIK A.;
RL SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; AF006637; G2209189; -.
DR EMBL; AF001980; G2624927; -.
DR MGD; MGI:1097677; SCYA21.
DR PFAM; PF00048; i18; 1.
SQ SEQUENCE 133 AA; 14558 MW; C0532523 CRC32;

Query Match 71.9%; Score 69; DB 11; Length 133;
Best Local Similarity 66.7%; Pred. No. 2.58e-02;
Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 73 ELCANPEEGWQ 84
QY 1 EICADPKKQWQ 12

RESULT 13
ID Q99664 PRELIMINARY; PRT; 95 AA.
AC Q99664;
DT 01-MAY-1997 (TREMREL. 03, CREATED)
DT 01-MAY-1997 (TREMREL. 03, LAST SEQUENCE UPDATE)
DE CHEMOKINE EXODUS.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-PANCREAS;
RX MEDLINE; 97275143.
RA HROMAS R., GRAY P.W., CHANTRY D., GODISKA R., KRATHWOHL M., FIFE K.,
RA BELL G.I., TAKEDA J., ARONICA S., GORDON M., COOPER S.,
RA BROXMEYER H.E., KLEMSZ M.J.;
RT "Cloning and characterization of exodus, a novel beta-chemokine.";
RL BLOOD 89:3315-3322(1997).
DR EMBL; U64197; G1778717; -.
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; i18; 1.
SQ SEQUENCE 95 AA; 10691 MW; 1526B4C0 CRC32;

Query Match 70.8%; Score 68; DB 4; Length 95;
Best Local Similarity 60.0%; Pred. No. 4.12e-02;
Matches 6; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 72 VCANPKQWQ 81
QY 2 ICADPKKQWQ 11

Sat Feb 5 12:04:39 2000

US-09-150-813-65.rspt

RESULT 14
 ID P97884 PRELIMINARY; PRT; 96 AA.
 AC P97884;
 DT 01-MAY-1997 (TREMREL. 03, CREATED)
 DT 01-MAY-1997 (TREMREL. 03, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
 DE CC CHEMOKINE EXODUS.
 OS RATTUS NORVEGICUS (RAT).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
 OC SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
 RN [1]

SEQUENCE FROM N.A.
 RP STRAIN-SPRAGUE-DAWLEY;
 RC STRAIN-FISHER 344; TISSUE-BRAIN;
 RA UTANS-SCHNEITZ U., LOREZ H., KLINKERT W.E.F., DA SILVA J.,
 RA LESSLAUER W.;
 RT "A novel rat CC chemokine, identified by targeted differential
 display, is upregulated in brain inflammation.";
 RL J. NEUROIMMUNOL. 0:0-0(1998).
 DR EMBL; U90447; G1899246; -.
 DR EMBL; AF053312; G3551817; -.
 DR PFAM; PF00048; i18; 1.
 KW SIGNAL.
 SQ SEQUENCE 96 AA; 10875 MW; 3FC09DD8 CRC32;

Query Match 70.8%; Score 68; DB 11; Length 96;
 Best Local Similarity 70.0%; Pred. No. 4.12e-02;
 Matches 7; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

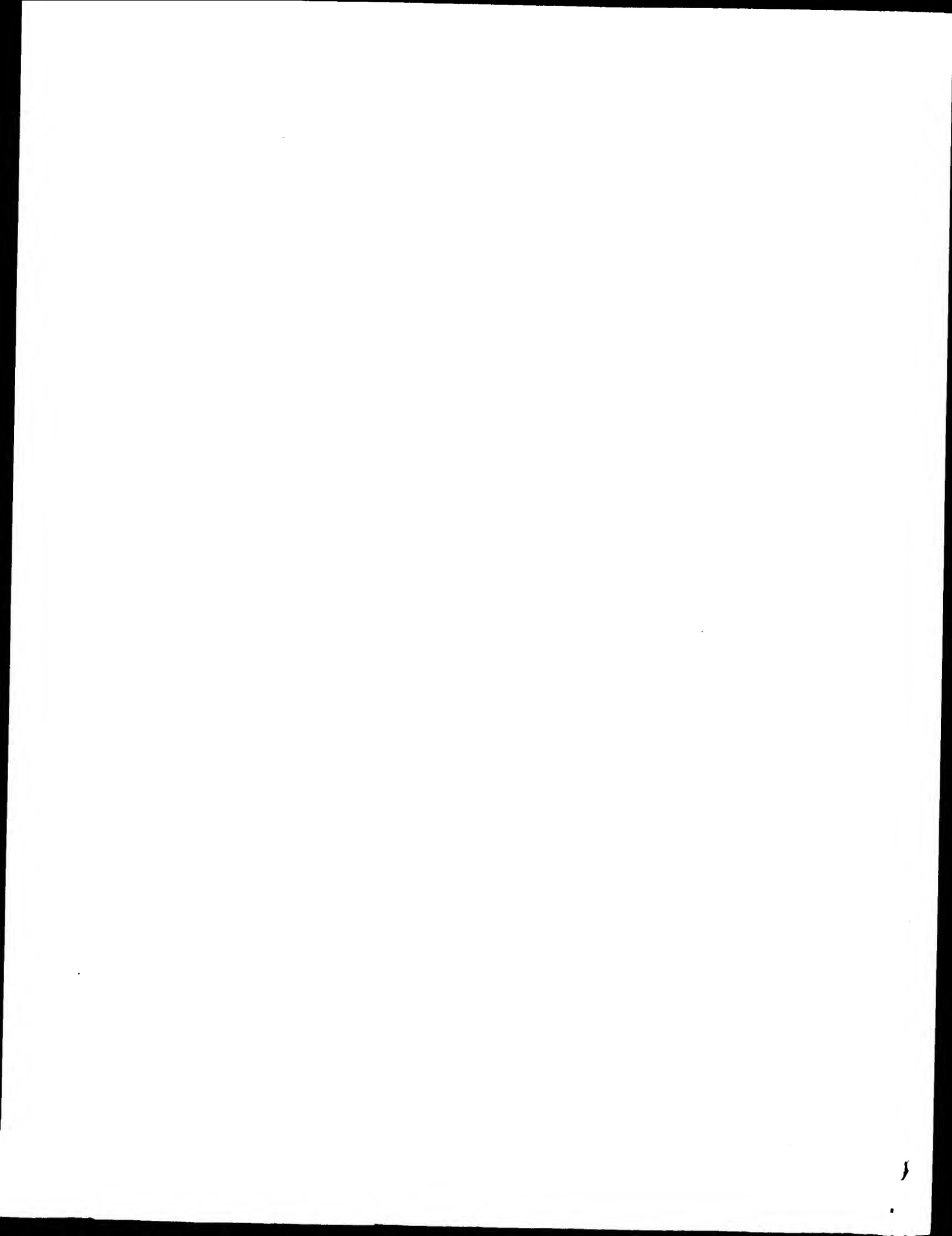
Db 73 VCADPKQIYW 82
 Qy 2 ICADPKKQV 11

RESULT 15
 ID O62812 PRELIMINARY; PRT; 97 AA.
 AC O62812;
 DT 01-AUG-1998 (TREMREL. 07, CREATED)
 DT 01-AUG-1998 (TREMREL. 07, LAST SEQUENCE UPDATE)
 DT 01-AUG-1998 (TREMREL. 07, LAST ANNOTATION UPDATE)
 DE INTERLEUKIN-8 (FRAGMENT).
 GN IL-8.
 OS EQUUS CABALLUS (HORSE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC PERISSODACTYLA; EQUIDAE; EQUUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE-BRONCHOALVEOLAR TISSUE;
 RA FRANCHINI M.;
 RL SUBMITTED (APR-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; AF062377; G3126973; -.
 FT NON_TER 97 97
 SQ SEQUENCE 97 AA; 10742 MW; 00396FBF CRC32;

Query Match 70.8%; Score 68; DB 6; Length 97;
 Best Local Similarity 58.3%; Pred. No. 4.12e-02;
 Matches 7; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Db 75 EVCLNPHTKWVQ 86
 Qy 1 EICADPKKQVQ 12

Search completed: Fri Feb 4 17:40:46 2000
 Job time : 52 secs.



 W P E L E H (TM)

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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm
 Run on: Fri Feb 4 17:38:48 2000; MasPar time 3.57 Seconds
 134.609 Million cell updates/sec
 Tabular output not generated.

Title: >US-09-150-813-65
 Description: (1-12) from US09150813.p
 Perfect Score: 96
 Sequence: 1 EICADPKEKWWQ 12

Scoring table: PAM 150
 Gap 15

Searched: 122810 seqs, 40068593 residues

Post-processing: Minimum Match 0%
 Listing first 45 summaries

Database: pir60
 1:pir1 2:pir2 3:pir3 4:pir4

Statistics: Mean 24.896; Variance 35.903; scale 0.693

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	ID	Description	Pred. No.
1	93	96.9	99	2	A60299 monocyte chemoattractant	9.81e-08
2	92	95.8	99	2	JC2136 monocyte chemoattractant	1.65e-07
3	88	91.7	99	2	JC2336 monocyte chemoattractant	1.30e-06
4	88	91.7	99	2	A39296 monocyte chemoattractant	1.30e-06
5	87	90.6	95	2	JN0841 interleukin-8 - dog	2.17e-06
6	87	90.6	101	2	S42496 interleukin-8 - sheep	2.17e-06
7	87	90.6	101	2	I46997 interleukin-8 - sheep	2.17e-06
8	87	90.6	103	2	A53096 interleukin-8 precurs	2.17e-06
9	87	90.6	103	2	A4253 alveolar macrophage c	2.17e-06
10	87	90.6	125	2	I46857 monocyte chemoattractant	2.17e-06
11	86	89.6	92	2	I23232 macrophage inflammato	3.62e-06
12	86	89.6	109	2	A34678 monocyte chemoattractant	3.62e-06
13	85	88.5	97	2	JC4912 eotaxin precursor - h	6.01e-06
14	85	88.5	99	2	JC5295 monocyte chemoattractant	6.01e-06
15	84	87.5	99	2	JC2417 monocyte chemoattractant	9.96e-06
16	84	87.5	101	2	I48147 interleukin-8 - rabbi	9.96e-06
17	84	87.5	120	2	I48147 monocyte chemoattractant	9.96e-06
18	83	86.5	96	2	JC3478 eotaxin precursor - r	1.65e-05
19	83	86.5	96	2	I48099 eotaxin precursor - g	1.65e-05
20	79	82.3	92	2	A32393 macrophage inflammato	1.20e-04
21	79	82.3	148	2	A32029 PDGF-inducible JE gly	1.20e-04
22	78	81.3	99	2	A37034 interleukin-8 precurs	1.97e-04
23	75	78.1	50	2	C60407 monocyte adherence-in	8.46e-04

24	75	78.1	92	1	A31767 macrophage inflammato	8.46e-04
25	75	78.1	92	2	A30574 macrophage inflammato	8.46e-04
26	75	78.1	93	2	B35673 LD78-beta protein pre	8.46e-04
27	75	78.1	148	2	S07723 immediate-early serum	1.37e-03
28	74	77.1	101	2	I48148 neutrophil attractant	1.37e-03
29	74	77.1	120	2	JE0177 lymphocyte and monocy	2.21e-03
30	73	76.0	89	2	A53497 pre-B-cell growth-sti	2.21e-03
31	73	76.0	89	2	I53416 interleukin-8 homolog	2.21e-03
32	73	76.0	91	1	A46539 monocyte chemoattract	2.21e-03
33	73	76.0	93	2	I81182 cytokine - mouse	2.21e-03
34	73	76.0	93	2	G01540 cytokine SDF-1-beta -	3.55e-03
35	72	75.0	92	2	I46730 immune activation gen	3.55e-03
36	69	71.9	114	1	ETMSL lymphotactin precurs	1.45e-02
37	67	69.8	91	1	A28815 monocyte chemoattract	3.65e-02
38	66	68.8	760	2	S55520 Chitin synthetase I -	5.76e-02
39	65	67.7	92	2	C30552 macrophage inflammato	9.06e-02
40	64	66.7	97	2	A48093 monocytic cytokine FI	1.42e-01
41	64	66.7	103	2	I50417 RSV-induced protein -	1.42e-01
42	64	66.7	103	2	A26736 transformation-induce	1.42e-01
43	63	65.6	116	2	I49555 gene C10 protein - mo	2.22e-01
44	62	64.6	114	1	ETHUL lymphotactin precurs	3.45e-01
45	57	59.4	178	2	F69804 hypothetical protein	2.96e+00

ALIGNMENTS

RESULT 1 A60299 #type complete
 ENTRY monocyte chemoattractant protein 1 precursor - human
 TITLE GDGF-1; glioma-derived monocyte chemotactic factor 1; MCPAF;
 ALTERNATE_NAMES MCP-1; monocyte chemotactic factor 1; monocyte secretory
 protein; tumor-derived chemotactic factor 2 (GDCF-2)
 CONTAINS glioma-derived chemotactic factor 2 (GDCF-2)
 ORGANISM #formal_name Homo sapiens #common_name man
 DATE 20-Feb-1993 #sequence_revision 20-Feb-1993 #text_change
 A35474; A33476; S03339; I51841; A60299; A32300; A32396;
 A34561; I57488; JC1096
 A35474
 Shyy, Y.-J.; Li, Y.-S.; Kolattukudy, P.E.
 Biochem. Biophys. Res. Commun. (1990) 169:346-351
 Structure of human monocyte chemotactic protein gene and its
 regulation by tPA.
 #cross-references MIM:90290466
 #accession A35474
 #molecule_type DNA
 ##residues 1-99 #label SHY
 ##cross-references GB:M37719; NID:g187447; PID:g487124
 A33476
 Rollins, B.J.; Stier, P.; Ernst, T.; Wong, G.G.
 Mol. Cell. Biol. (1989) 9:4687-4695
 The human homolog of the JE gene encodes a monocyte secretory
 protein.
 #cross-references MIM:90097880
 #accession A33476
 ##molecule_type mRNA
 ##residues 1-99 #label ROL
 ##cross-references GB:M30816; GB:M31625; GB:M31626; NID:g188701;
 PID:g386961
 YOSHIMURA, T.; YUKIKI, N.; MOORE, S.K.; APPPELLA, E.; LERMAN,
 M.I.; LEONARD, E.J.
 FEBS Lett. (1989) 244:487-493
 Human monocyte chemoattractant protein-1 (MCP-1). Full-length
 cDNA cloning, expression in mitogen-stimulated blood
 mononuclear leukocytes, and sequence similarity to mouse
 competence gene JE.
 #cross-references MIM:89153605
 #accession S03339
 ##status not compared with conceptual translation
 ##molecule_type mRNA
 ##residues 1-99 #label YOS
 ##cross-references GB:X14768; NID:g34513; PID:g34514

```

##experimental_source glioma cell line U-105MG
REFERENCE
#authors Yoshimura, T.; Leonard, E.J.
#journal Adv. Exp. Med. Biol. (1991) 305:47-56
#title Human monocyte chemoattractant protein-1 (MCP-1).
#cross-references MUID:92095166
#accession I51841
##status Preliminary; translated from GB/EMBL/DBJ
##molecule_type mRNA
##residues 1-99 #label Y02
##cross-references GB:S71513; NID:g240867; PID:g240868
REFERENCE
#authors Bottazzi, B.; Colotta, F.; Sica, A.; Nobili, N.; Mantovani, A.
#journal Int. J. Cancer (1990) 45:795-797
#title A chemoattractant expressed in human sarcoma cells (tumor-derived chemotactic factor, TDCF) is identical to monocyte chemoattractant protein-1/monocyte chemotactic and activating factor (MCP-1/MCAF).
#accession A60299
##status not compared with conceptual translation
##molecule_type mRNA
##residues 1-99 #label BOT
REFERENCE
#authors Furukani, Y.; Nomura, H.; Notake, M.; Oyama, Y.; Fukui, T.; Yamada, M.; Larsen, C.G.; Oppenheim, J.J.; Matsushima, K.
#journal Biochem. Biophys. Res. Commun. (1989) 159:249-255
#title Cloning and sequencing of the cDNA for human monocyte chemotactic and activating factor (MCAF).
#cross-references MUID:89165862
#accession A32300
##status not compared with conceptual translation
##molecule_type mRNA
##residues 1-99 #label FUR
##cross-references GB:M24545; NID:g187434; PID:g307163
REFERENCE
#authors Robinson, E.A.; Yoshimura, T.; Leonard, E.J.; Tanaka, S.; Griffin, P.R.; Shabanowitz, J.; Hunt, D.F.; Appella, E.
#journal Proc. Natl. Acad. Sci. U.S.A. (1989) 86:1850-1854
#title Complete amino acid sequence of a human monocyte chemoattractant, a putative mediator of cellular immune reactions.
#cross-references MUID:89184525
#accession A32396
##molecule_type protein
##residues 'X', 25-99 #label ROB
REFERENCE
#authors Decock, B.; Conings, R.; Lenaerts, J.P.; Billiau, A.; Van Damme, J.
#journal Biochem. Biophys. Res. Commun. (1990) 167:904-909
#title Identification of the monocyte chemotactic protein from human osteosarcoma cells and monocytes: detection of a novel N-terminally processed form.
#cross-references MUID:90211336
#accession A34561
##molecule_type protein
##residues 29-33, 'XX', 36-52; 82-92 #label DEC
REFERENCE
#authors Li, Y.S.; Shyy, V.J.; Wright, J.G.; Valente, A.J.; Cornhill, J.F.; Kolattukudy, P.E.
#journal Mol. Cell. Biochem. (1993) 126:61-68
#title The expression of monocyte chemotactic protein (MCP-1) in human vascular endothelium in vitro and in vivo.
#cross-references MUID:94150478
#accession I57488
##status translated from GB/EMBL/DBJ
##molecule_type mRNA
##residues 1-99 #label LTY
##cross-references GB:S69738; NID:g545464; PID:g545465
REFERENCE
#authors Ye, Q.N.; Su, G.F.; Yuan, Y.; Huang, C.F.
#journal Chinese J. Microbiol. Immunol. (1994) 14:29-32
#title The PCR, cloning and sequencing of human monocyte

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#accession JCI096
#molecule_type mRNA
##residues 24-28, 'Q', 30-99 #label YEQ
GENETICS
#gene GDB:SCYA2
#map_position 17q11.2-17q12
#cross-references GDB:125279; OMIM:158105
CLASSIFICATION
#superfamily macrophage inflammatory protein
#cytokine; glycoprotein; inflammation; pyroglutamic acid
FEATURE
1-23
24-99
29-99
24
37
#domain signal sequence #status predicted #label SIG\
#product monocyte chemoattractant protein 1 #status
experimental #label MAT\
#product monocyte chemoattractant protein 1, short form
#status experimental #label MAT2\
#modified_site pyroglutamic acid (Gln) (in
mature form) #status experimental\
#binding_site carbohydrate (Asn) (covalent) #status
predicted
#length 99 #molecular-weight 11025 #checksum 7984
SUMMARY
Query Match 96.9%; Score 93; DB 2; Length 99;
Best Local Similarity 91.7%; Pred. No. 9.81e-08;
Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 73 EICADPKQKWQ 84
QY 1 EICADPKQKWQ 12
|||||:|||||
RESULT 2
ENTRY JC2136 #type complete
#monocyte chemoattractant protein-1 precursor - pig
#formal_name Sus scrofa domestica #common_name domestic pig
#30-Sep-1993 #sequence_revision 20-Aug-1994 #text_change
17-Mar-1999
ACCESSIONS JC2136; S57498
REFERENCE JC2136
#authors Hosang, K.; Knoke, I.; Klaudiny, J.; Wempe, F.; Wuttke, W.;
Scheit, K.H.
#journal Biochem. Biophys. Res. Commun. (1994) 199:962-968
#title Porcine luteal cells express monocyte chemoattractant
protein-1 (MCP-1): Analysis by polymerase chain reaction
and cDNA cloning.
#cross-references MUID:94183284
#accession JC2136
##molecule_type mRNA
##residues 1-99 #label HOS
REFERENCE S57497
#authors Zach, O.
#submission submitted to the EMBL Data Library, July 1994
#accession S57498
##status Preliminary
##molecule_type mRNA
##residues 1-99 #label ZAC
#cross-references EMBL:X79416; NID:g872312; PID:g872313
CLASSIFICATION
#superfamily macrophage inflammatory protein
#glycoprotein
FEATURE
1-23
24-99
#domain signal sequence #status predicted #label SIG\
#product monocyte chemoattractant protein-1 #status
predicted #label MAT\
#binding_site carbohydrate (Asn) (covalent) #status
predicted
#length 99 #molecular-weight 10976 #checksum 9768
SUMMARY
Query Match 95.8%; Score 92; DB 2; Length 99;
Best Local Similarity 83.3%; Pred. No. 1.65e-07;
Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
Db 73 EICADPKQKWQ 84
|||||:|||||

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QY      1 EICADPKKWWQ 12

RESULT      5
ENTRY      JN0841      #type complete
TITLE      interleukin-8 - dog
ORGANISM    #formal_name Canis lupus familiaris #common_name dog
DATE        19-May-1994 #sequence_revision 19-May-1994 #text_change
12-Apr-1995

ACCESSIONS  JN0841
REFERENCE    Ishikawa, J.; Suzuki, S.; Hotta, K.; Hirota, Y.; Mizuno, S.;
#authors     Suzuki, K.
#journal     Gene (1993) 131:305-306
#title       Cloning of a canine gene homologous to the human
              interleukin-8-encoding gene.
#cross-references MUID:94010328
#accession     JN0841
#molecule_type DNA
#residues      1-95 #label ISH
COMMENT       This protein is a polymorphonuclear leukocytes chemotactic factor
              and is involved in the host defense function.

GENETICS     22/1: 67/2
#introns      #superfamily beta-thromboglobulin
CLASSIFICATION #length 95 #molecular-weight 10611 #checksum 3157
SUMMARY

Query Match 90.6%; Score 87; DB 2; Length 95;
Best Local Similarity 83.3%; Pred. No. 2.17e-06;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 75 EVCLDPKWWQ 86
1:|||||
QY      1 EICADPKKWWQ 12

RESULT      6
ENTRY      S42496      #type complete
TITLE      interleukin 8 - sheep
ORGANISM    #formal_name Ovis orientalis aries, Ovis ammon aries
              #common_name domestic sheep
DATE        06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change
08-Sep-1997
ACCESSIONS  S42496
REFERENCE    Legastelois, I.; Greenland, T.; Arnaud, P.; Mornex, J.F.;
#authors     Cordier, G.
#submission  submitted to the EMBL Data Library, March 1994
#description  Nucleotide sequence of ovine interleukin 8 cDNA using
              polymerase chain reaction.
#accession     S42496
#status        preliminary
#molecule_type mRNA
#residues      1-101 #label LEG
#cross-references EMBL:X78306; NID:g463253; PID:g463254
CLASSIFICATION #superfamily beta-thromboglobulin
              #length 101 #molecular-weight 11292 #checksum 294
SUMMARY

Query Match 90.6%; Score 87; DB 2; Length 101;
Best Local Similarity 83.3%; Pred. No. 2.17e-06;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 75 EVCLDPKWWQ 86
1:|||||
QY      1 EICADPKKWWQ 12

RESULT      7
ENTRY      I46997      #type complete
TITLE      interleukin-8 - sheep
ORGANISM    #formal_name Ovis sp. #common_name sheep
DATE        21-Feb-1997 #sequence_revision 21-Feb-1997 #text_change
09-May-1997

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QY      1 EICADPKKWWQ 12

RESULT      3
ENTRY      JC2336      #type complete
TITLE      monocyte chemoattractant protein-1 - bovine
ORGANISM    #formal_name Bos primigenius indicus #common_name zebu cattle
DATE        20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change
03-May-1996

ACCESSIONS  JC2336
REFERENCE    Wempe, F.; Kuhlmann, J.K.; Scheit, K.H.
#authors     Biochem. Biophys. Res. Commun. (1994) 202:1272-1279
#journal     Characterization of the bovine monocyte chemoattractant
              protein-1 gene.
#cross-references MUID:94338337
#accession     JC2336
#molecule_type protein
#residues      1-99 #label WEM

GENETICS     MCP-1
#gene         26/1: 65/2
#introns      #superfamily macrophage inflammatory protein
CLASSIFICATION #length 99 #molecular-weight 11114 #checksum 9401
SUMMARY

Query Match 91.7%; Score 88; DB 2; Length 99;
Best Local Similarity 83.3%; Pred. No. 1.30e-06;
Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 73 EICADPKKWWQ 84
1:|||||
QY      1 EICADPKKWWQ 12

RESULT      4
ENTRY      A39296      #type complete
TITLE      monocyte chemoattractant protein 1 precursor - bovine
ALTERNATE_NAMES monocyte chemoattractant factor 1; seminal plasma protein p6
ORGANISM    #formal_name Bos primigenius taurus #common_name cattle
DATE        03-Aug-1992 #sequence_revision 03-Aug-1992 #text_change
31-Oct-1997
ACCESSIONS  A39296; B39296
REFERENCE    Wempe, F.; Henschen, A.; Scheit, K.H.
#authors     DNA Cell Biol. (1991) 10:671-679
#journal     Gene expression and cDNA cloning identified a major basic
              protein constituent of bovine seminal plasma as bovine
              monocyte-chemoattractant protein-1 (MCP-1).
#cross-references MUID:92096117
#accession     A39296
#molecule_type mRNA
#residues      1-99 #label WEM
#cross-references GB:M85264; NID:g163394; PID:g163395
#accession     B39296
#molecule_type protein
#residues      50-68,'X',70-74,'X',76 #label WE2
#experimental_source seminal vesicle
CLASSIFICATION #superfamily macrophage inflammatory protein
              glycoprotein
KEYWORDS     #domain signal sequence #status predicted #label SIG\
              #product monocyte chemoattractant protein 1 #status
              predicted #label MAT\
              #binding_site carbohydrate (Asn) (covalent) #status
              predicted
              #length 99 #molecular-weight 11114 #checksum 9401
SUMMARY

Query Match 91.7%; Score 88; DB 2; Length 99;
Best Local Similarity 83.3%; Pred. No. 1.30e-06;
Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 73 EICADPKKWWQ 84
1:|||||

```

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ACCESSIONS
REFERENCE
I46997
#authors
Seow, H.F.; Yoshimura, T.; Wood, P.R.; Colditz, I.G.
#journal
Immunol. Cell Biol. (1994) 72:398-405
#title
Cloning, sequencing, expression and inflammatory activity in
skin of ovine interleukin-8.
#cross-references MUID:95137691
#accession
I46997
#status
Preliminary; translated from GB/EMBL/DBJ
#molecule_type
mRNA
#residues
1-101 ##label SEQ
#cross-references GB:S74436; NID:g786590; PID:g786591
GENETICS
OIL-8
#gene
#superfamily beta-thromboglobulin
CLASSIFICATION
#length 101 #molecular-weight 11292 #checksum 294
SUMMARY
Query Match 90.6%; Score 87; DB 2; Length 101;
Best Local Similarity 83.3%; Pred. No. 2.17e-06;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
Db 75 EVCLDPKRWQ 86
I:| | | | | | | |
QY 1 EICADPKRWQ 12

RESULT 8
ENTRY
TITLE
#type complete
#formal_name Sus scrofa domestica #common_name domestic pig
ORGANISM
DATE
02-Jun-1995 #sequence_revision 02-Jun-1995 #text_change
ACCESSIONS
A53096
REFERENCE
#authors
Lin, G.; Pearson, A.E.; Scamurra, R.W.; Zhou, Y.; Baarsch,
M.J.; Weiss, D.J.; Murtaugh, M.P.
#journal
J. Biol. Chem. (1994) 269:77-85
#title
Regulation of interleukin-8 expression in porcine alveolar
macrophages by bacterial lipopolysaccharide.
#cross-references MUID:94103307
#accession
A53096
#status
Preliminary
#molecule_type
mRNA
#residues
1-103 ##label LIN
#cross-references GB:M66923; NID:g164520; PID:g164521
CLASSIFICATION
#superfamily beta-thromboglobulin
#length 103 #molecular-weight 11633 #checksum 8835
SUMMARY
Query Match 90.6%; Score 87; DB 2; Length 103;
Best Local Similarity 83.3%; Pred. No. 2.17e-06;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
Db 75 EVCLDPKRWQ 86
I:| | | | | | | |
QY 1 EICADPKRWQ 12

RESULT 9
ENTRY
TITLE
#type complete
#formal_name Sus scrofa domestica #common_name domestic pig
ORGANISM
DATE
30-Apr-1993 #sequence_revision 18-Nov-1994 #text_change
ACCESSIONS
A44253
REFERENCE
#authors
Goodman, R.B.; Foster, D.C.; Mathewes, S.L.; Osborn, S.G.;
Kuljper, J.L.; Forstrom, J.W.; Martin, T.R.
#journal
Biochemistry (1992) 31:10483-10490
#title
Molecular cloning of porcine alveolar macrophage-derived
neutrophil chemotactic factors I and II; identification of
porcine IL-8 and another intercrine-alpha protein.
#cross-references MUID:93041741
#accession
A44253
#status
Preliminary; translated from GB/EMBL/DBJ
#molecule_type
mRNA
#residues
1-92 ##label RES
#cross-references EMBL:U22414; NID:g790632; PID:g790633
CLASSIFICATION
#superfamily macrophage inflammatory protein
#length 92 #molecular-weight 10335 #checksum 3194
#accession
A44253
#status
Preliminary
#molecule_type
mRNA
#residues
1-103 ##label GOO
#experimental_source alveolar macrophage
#note
sequence extracted from NCBI backbone (NCBIN:117415,
NCBIP:117416)
CLASSIFICATION
#superfamily beta-thromboglobulin
#length 103 #molecular-weight 11677 #checksum 8904
SUMMARY
Query Match 90.6%; Score 87; DB 2; Length 103;
Best Local Similarity 83.3%; Pred. No. 2.17e-06;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
Db 75 EVCLDPKRWQ 86
I:| | | | | | | |
QY 1 EICADPKRWQ 12

RESULT 10
ENTRY
TITLE
#type complete
#formal_name Oryctolagus cuniculus #common_name domestic
rabbit
ORGANISM
DATE
14-Feb-1997 #sequence_revision 14-Feb-1997 #text_change
ACCESSIONS
I46857
REFERENCE
#authors
Yoshimura, T.; Yuhki, N.
#journal
J. Immunol. (1991) 146:3483-3488
#title
Neutrophil attractant protein-1 in rabbit: cDNA cloning and their
chemoattractant protein-1 expression in spleen cells.
#cross-references MUID:91225489
#accession
I46857
#status
Preliminary; translated from GB/EMBL/DBJ
#molecule_type
mRNA
#residues
1-125 ##label YOS
#cross-references GB:M57440; NID:g165469; PID:g165470
CLASSIFICATION
#superfamily macrophage inflammatory protein
#length 125 #molecular-weight 13776 #checksum 4498
SUMMARY
Query Match 90.6%; Score 87; DB 2; Length 125;
Best Local Similarity 90.9%; Pred. No. 2.17e-06;
Matches 10; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 74 ICADPKQKWQ 84
I:| | | | | | | |
QY 2 ICADPKRWQ 12

RESULT 11
ENTRY
TITLE
#type complete
#formal_name Rattus norvegicus #common_name Norway rat
ORGANISM
DATE
29-May-1998 #sequence_revision 29-May-1998 #text_change
ACCESSIONS
I52322
REFERENCE
#authors
Shi, M.M.; Godleski, J.J.; Paulauskis, J.D.
#journal
Biochem. Biophys. Res. Commun. (1995) 211:289-295
#title
Molecular cloning and posttranscriptional regulation of
macrophage inflammatory protein-1 alpha in alveolar
macrophages.
#cross-references MUID:95298037
#accession
I52322
#status
Preliminary; translated from GB/EMBL/DBJ
#molecule_type
mRNA
#residues
1-92 ##label RES
#cross-references EMBL:U22414; NID:g790632; PID:g790633
CLASSIFICATION
#superfamily macrophage inflammatory protein
#length 92 #molecular-weight 10335 #checksum 3194
SUMMARY

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Query Match      89.6%; Score 86; DB 2; Length 92;
Best Local Similarity 83.3%; Pred. No. 3.62e-06;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 71 QICADPKETWVQ 82
   :|||||
   1 EICADPKETWVQ 12

RESULT 12
ENTRY A54678 #type complete
TITLE monocyte chemotactic protein 3 precursor - human
ALTERNATE_NAMES monocyte chemoattractant protein MCP-3
ORGANISM #formal_name Homo sapiens #common_name man
DATE 28-Oct-1994 #sequence_revision 28-Oct-1994 #text_change
17-Mar-1999

ACCESSIONS A54678; JCI1478; S32222
REFERENCE A54678
#authors Opdenakker, G.; Fiten, P.; Nys, G.; Froyen, G.; Van Roy, N.;
Speleman, F.; Laureys, G.; Van Damme, J.
#journal Genomics (1994) 21:403-408
#title The human MCP-3 gene (SCYA7): cloning, sequence analysis, and
assignment to the C-C chemokine gene cluster on chromosome
17q11.2-q12.
#cross-references MUID:94375065
#accession A54678
#molecule_type DNA
#residues 1-109 #label OPD
#cross-references GB:X72309
REFERENCE JCI1478
#authors Opdenakker, G.; Froyen, G.; Fiten, P.; Proost, P.; Van Damme,
J.
#journal Biochem. Biophys. Res. Commun. (1993) 191:535-542
#title Human monocyte chemotactic protein-3 (MCP-3): Molecular
cloning of the cDNA and comparison with other chemokines.
#cross-references MUID:93213290
#accession JCI1478
#molecule_type mRNA
#residues 1-109 #label OP2
REFERENCE S32222
#authors Minty, A.; Chalon, P.; Guillemot, J.C.; Kaghad, M.; Liauzon,
P.; Magazin, M.; Miloux, B.; Minty, C.; Ramond, P.; Vica,
N.; Lupker, J.; Shire, D.; Ferrara, P.; Caput, D.
#submission Submitted to the EMBL Data Library, March 1993
#description Molecular cloning of MCP-3: a human monocyte-derived monocyte
chemoattractant protein.
#accession S32222
#molecule_type mRNA
#residues 1-109 #label MIN
#cross-references EMBL:X71087; NID:q288396; PID:g288397
COMMENT This protein induces proteinase secretion and chemotaxis by
macrophages and monocytes.
GENETICS
#gene GDB:SCYA7; SCYA6; MCP-3
#map_position 17q11-17q12
#introns 36/1; 75/2
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS cytokine; glycoprotein; inflammation
FEATURE 1-33 #domain signal sequence #status predicted #label SIG\
34-109 #product monocyte chemotactic protein 3 #status
predicted #label MAT\
39 #binding site carbohydrate (Asn) (covalent) #status
predicted
SUMMARY #length 109 #molecular-weight 12356 #checksum 1535
Query Match 89.6%; Score 86; DB 2; Length 109;
Best Local Similarity 83.3%; Pred. No. 3.62e-06;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 83 EICADPTQKWVQ 94
   :|||||
   1 EICADPKETWVQ 12

RESULT 13
ENTRY JC4912 #type complete
TITLE eotaxin precursor - human
ORGANISM #formal_name Homo sapiens #common_name man
DATE 01-Nov-1996 #sequence_revision 01-Nov-1996 #text_change
13-Nov-1998

ACCESSIONS JC4912
REFERENCE JC4912
#authors Bartels, J.; Schlueter, C.; Richter, E.; Noso, N.; Kulke, R.;
Christophers, E.; Schroeder, J.M.
#journal Biochem. Biophys. Res. Commun. (1996) 225:1045-1051
#title Human dermal fibroblasts express eotaxin: Molecular cloning,
mRNA expression, and identification of eotaxin sequence
variants.
#accession JC4912
#status preliminary
#molecule_type mRNA
#residues 1-97 #label BAR
#cross-references EMBL:Z75668; NID:g1531982; PID:e251275; PID:g1531983
#experimental_source dermal fibroblast
COMMENT This protein has eosinophil specific chemotactic activity.
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS fibroblast
FEATURE #domain signal sequence #status predicted #label SIG\
19-97 #product eotaxin #status predicted #label MAT\
length 97 #molecular-weight 10790 #checksum 448
SUMMARY
Query Match 88.5%; Score 85; DB 2; Length 97;
Best Local Similarity 75.0%; Pred. No. 6.01e-06;
Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 71 DICADPKKRWVQ 82
   :|||||
   1 EICADPKETWVQ 12

RESULT 14
ENTRY JC5295 #type complete
TITLE monocyte chemotactic protein-2 precursor - human
ORGANISM #formal_name Homo sapiens #common_name man
DATE 02-May-1997 #sequence_revision 18-Jul-1997 #text_change
17-Mar-1999

ACCESSIONS JC5295
REFERENCE JC5295
#authors Van Coillie, E.; Froyen, G.; Nomiya, H.; Miura, R.; Fiten,
P.; Van Aelst, I.; Van Damme, J.; Opdenakker, G.
#journal Biochem. Biophys. Res. Commun. (1997) 231:726-730
#title Human monocyte chemotactic protein-2: cDNA cloning and
regulated expression of mRNA in mesenchymal cells.
#cross-references MUID:97224420
#accession JC5295
#molecule_type mRNA
#residues 1-99 #label VAN
#cross-references GB:X10802; NID:g1924937; PID:e294088; PID:g1924938
#experimental_source bone marrow
COMMENT This protein belongs to the beta-chemokine family which is one of
the major HIV-suppressive factors. It plays roles in autoimmune
processes such as multiple sclerosis and rheumatoid arthritis and
in tumor biology, and contribute to the trafficking and
recruitment of the responsive cells.
GENETICS
#gene mcp-2
CLASSIFICATION #superfamily macrophage inflammatory protein
FEATURE #domain signal sequence #status predicted #label SIG\
1-23 #product monocyte chemotactic protein-2 #status
predicted #label MAT\
24-99 #length 99 #molecular-weight 11246 #checksum 6596
SUMMARY

```

Query Match 88.5%; Score 85; DB 2; Length 99;
 Best Local Similarity 75.0%; Pred. No. 6.01e-06;
 Matches 9; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 73 EVCADPKRWVR 84
 I:|||||I:
 QY 1 EICADPKRWVQ 12

RESULT 15

ENTRY JC2417 #type complete
 TITLE monocyte chemoattractant protein-2 precursor - pig
 ORGANISM #formal_name Sus scrofa domestica #common_name domestic pig
 DATE 24-Feb-1995 #sequence_revision 24-Feb-1995 #text_change
 17-Mar-1999
 ACCESSIONS JC2417
 REFERENCE JC2417
 #authors Hosang, K.; Knoke, I.; Klaudiny, J.; Wempe, F.; Wuttke, W.;
 Scheit, K.H.
 #journal Biochem. Biophys. Res. Commun. (1994) 205:148-153
 #title Porcine luteal cells express monocyte chemoattractant
 protein-2 (MCP-2): Analysis by cDNA cloning and northern
 analysis.

#cross-references MUID:95091716

#accession JC2417
 #molecule_type mRNA
 #residues 1-99 #label HOS
 #experimental_source corpus luteum
 CLASSIFICATION #superfamily macrophage inflammatory protein

FEATURE

1-23
 24-99 #domain signal sequence #status predicted #label SIG\
 #product monocyte chemoattractant protein-2 #status
 predicted #label MAT

SUMMARY

#length 99 #molecular-weight 10903 #checksum 7556

Query Match 87.5%; Score 84; DB 2; Length 99;
 Best Local Similarity 75.0%; Pred. No. 9.96e-06;
 Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 73 EVCADPOQKWVQ 84
 I:|||||I:
 QY 1 EICADPKRWVQ 12

Search completed: Fri Feb 4 17:39:13 2000
 Job time : 25 secs.

OS MUS MUSCULUS (MOUSE)
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
 OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
 RN [1]

RP SEQUENCE FROM N.A.
 RX MEDLINE: 97320499.
 RA PAN Y., CLARE L., HONG Z., DOLICH S., DEEDS J., GONZALO J., VATH J.,
 RA GOSSELIN M., MA J., DUSSAULT B., WOLFF B., ALPERIN A., CULPEPPER J.,
 RA GUTIERREZ-RAMOS J.C., GEARING D.;
 RT "Neurotactin, a membrane-anchored chemokine upregulated in brain
 RT inflammation.";
 RL NATURE 387:611-617(1997).
 DR EMBL; AF010586; G2317698;
 DR MGD; MGI:1097153; SCYD1.
 DR PFAM; PF00048; i18; 1.
 SQ SEQUENCE 395 AA; 42098 MW; E3CD0612 CRC32;

Query Match 77.9%; Score 74; DB 11; Length 395;
 Best Local Similarity 72.7%; Pred. No. 9.25e-04;
 Matches 8; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 73 FCADPKKQWQ 83
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 QY 2 ICADPTQKRWQ 12

RESULT 3
 ID O35933 PRELIMINARY; PRT; 395 AA.
 AC O35933;
 DT 01-JAN-1998 (TREMBLREL. 05, CREATED)
 DT 01-JAN-1998 (TREMBLREL. 05, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE FRACTALKINE.
 OS MUS MUSCULUS (MOUSE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
 OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
 RN [1]

RP SEQUENCE FROM N.A.
 RC STRAIN-BALB/C; TISSUE-BRAIN;
 RA ROSSI D., HARDMAN G., COPELAND N., GILBERT D.J., JENKINS N.,
 RA ZLOTNIK A., BAZAN J.F.;
 RL SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; U92565; G2459677;
 DR PFAM; PF00048; i18; 1.
 SQ SEQUENCE 395 AA; 42040 MW; 3997A113 CRC32;

Query Match 77.9%; Score 74; DB 11; Length 395;
 Best Local Similarity 72.7%; Pred. No. 9.25e-04;
 Matches 8; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 73 FCADPKKQWQ 83
 :||||:||||
 QY 2 ICADPTQKRWQ 12

RESULT 4
 ID O57411 PRELIMINARY; PRT; 97 AA.
 AC O57411;
 DT 01-JUN-1998 (TREMBLREL. 06, CREATED)
 DT 01-JUN-1998 (TREMBLREL. 06, LAST SEQUENCE UPDATE)
 DT 01-JUN-1998 (TREMBLREL. 06, LAST ANNOTATION UPDATE)
 DE LYMPHOTACTIN PRECURSOR.
 OS GALLUS GALLUS (CHICKEN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; ARCHOSAURIA; AVES;
 OC NEOGNATHAE; GALLIFORMES; PHASIANIDAE; PHASIANINAE; GALLUS.
 RN [1]

RP SEQUENCE FROM N.A.
 RC TISSUE-SPLEEN;
 RA ROSSI D.L., BAZAN J.F., ZLOTNIK A.;
 RL SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; AF006742; G2627882;
 DR PFAM; PF00048; i18; 1.
 KW SIGNAL.
 FT SIGNAL 1 24 POTENTIAL.

FT CHAIN 25 97 LYMPHOTACTIN
 SQ SEQUENCE 97 AA; 11131 MW; 3290101C CRC32;

Query Match 75.8%; Score 72; DB 13; Length 97;
 Best Local Similarity 72.7%; Pred. No. 2.53e-03;
 Matches 8; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Db 72 ICVHPKQWQ 82
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 QY 2 ICADPTQKRWQ 12

RESULT 5
 ID Q98158 PRELIMINARY; PRT; 95 AA.
 AC Q98158; O12569;
 DT 01-FEB-1997 (TREMBLREL. 02, CREATED)
 DT 01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE ORF K6.
 OS KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS.
 OC VIRUSES; DSDNA VIRUSES, NO RNA STAGE; HERPESVIRIDAE;
 OC GAMMAHERPESVIRINAE; RHADINOVIRUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 97094384.
 RA MOORE P.S., BASHOFF C., WEISS R.A., CHANG Y.;
 RT "Molecular mimicry of human cytokine and cytokine response pathway
 RT genes by KSHV.";
 RL SCIENCE 274:1739-1744(1996).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 97121480.
 RA RUSSO J.J., BOHENZKY R.A., CHIEN M.C., CHEN J., YAN M., MADDALENA D.,
 RA PARRY J.P., PERUZZI D., EDELMAN I.S., CHANG Y., MOORE P.S.;
 RT "Nucleotide sequence of the Kaposi sarcoma-associated herpesvirus
 RT (HVC8).";
 RL PROC. NATL. ACAD. SCI. U.S.A. 93:14862-14867(1996).
 RN [3]
 RP SEQUENCE FROM N.A.
 RA RUSSO J.J., BOHENZKY R.A., CHIEN M.C., CHEN J., YAN M., MADDALENA D.,
 RA PARRY J.P., PERUZZI D., EDELMAN I.S., CHANG Y., MOORE P.S.;
 RL SUBMITTED (OCT-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [4]
 RP SEQUENCE FROM N.A.
 RA NICHOLAS J., RUVOLO V.R., BURNS W.H., SANDFORD G., WAN X., CIUFO D.,
 RA HENDRICKSON S., GUO H.G., HAYWARD G.S., REITZ M.S.;
 RL SUBMITTED (NOV-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [5]
 RP SEQUENCE FROM N.A.
 RA RUSSO J.J., BOHENZKY R.A., CHIEN M.C., CHEN J., YAN M., MADDALENA D.,
 RA PARRY J.P., PERUZZI D., EDELMAN I.S., CHANG Y., MOORE P.S.;
 RL SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [6]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 97296220.
 RA NEIPEL F., ALBRECHT J.C., FLECKENSTEIN B.;
 RT "Cell-homologous genes in the Kaposi's sarcoma-associated
 RT rhadinovirus human herpesvirus 8: determinants of its
 RT pathogenicity?";
 RL J. VIROL. 71:4187-4192(1997).
 RN [7]
 RP SEQUENCE FROM N.A.
 RA SUN R., LIN S.-F., MILLER G.;
 RL SUBMITTED (SEP-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; U75698; G1718266;
 DR EMBL; U74585; G1658273;
 DR EMBL; U93872; G2246546;
 DR EMBL; U71366; G3551763;
 DR PFAM; PF00048; i18; 1.
 KW HYPOTHETICAL PROTEIN.
 SQ SEQUENCE 95 AA; 10485 MW; 5283348D CRC32;

Query Match 73.7%; Score 70; DB 14; Length 95;

Sat Feb 5 12:04:43 2000

US-09-150-813-66.rspt

Best Local Similarity 58.3%; Pred. No. 6.81e-03;
Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 74 QICADPSKNVR 85
QY 1 EICADPTQKWQ 12

RESULT 6 PRELIMINARY; PRT; 119 AA.
ID O00175;
AC O00175;
DT 01-JUL-1997 (TREMBREL. 04, CREATED)
DT 01-JUL-1997 (TREMBREL. 04, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBREL. 08, LAST ANNOTATION UPDATE)
DE MP1F-2.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RA PATEL V.P., KREIDER B.L., LI Y., LI H., LEUNG K., SALCEDO T.,
RA NARDELLI B., PIPALLA V., GENTZ S., THOTAKURA R., PARMELEE D.,
RA GENTZ R., GAROTTA G.;
RL J. EXP. MED. 0:0-0(0).
DR EMBL; U85768; G1916252; -.
DR PFAM; PF00048; 118; 1.
SQ SEQUENCE 119 AA; 13119 MW; CDF526F0 CRC32;

Query Match 73.7%; Score 70; DB 4; Length 119;
Best Local Similarity 58.3%; Pred. No. 6.81e-03;
Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 72 OFCGDPKQEWQ 83
QY 1 EICADPTQKWQ 12

RESULT 7 PRELIMINARY; PRT; 92 AA.
ID O88430;
AC O88430;
DT 01-NOV-1998 (TREMBREL. 08, CREATED)
DT 01-NOV-1998 (TREMBREL. 08, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBREL. 08, LAST ANNOTATION UPDATE)
DE CC CHEMOKINE ABCD-1.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=LIVER;
RX MEDLINE; 98353531.
RA SCHANEL C., PARDALI E., SALLUSTO F., SPELETAS M., RUDEL C.,
RA SHIMIZU T., SEIDL T., ANDERSON J., MELCHERS F., ROLINK A.G.,
RA SIDERAS P.;
RT "Activated murine B lymphocytes and dendritic cells produce a novel
CC chemokine which acts selectively on activated T cells."
RL J. EXP. MED. 188:451-463(1998).
DR EMBL; AF052505; G3378116; -.
SQ SEQUENCE 92 AA; 10302 MW; BC7219A0 CRC32;

Query Match 72.6%; Score 69; DB 11; Length 92;
Best Local Similarity 72.7%; Pred. No. 1.11e-02;
Matches 8; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Db 74 DICADPROVW 84
QY 1 EICADPTQKWQ 11

RESULT 8 PRELIMINARY; PRT; 97 AA.
ID O89093;
AC O89093;
DT 01-NOV-1998 (TREMBREL. 08, CREATED)

DT 01-NOV-1998 (TREMBREL. 08, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBREL. 08, LAST ANNOTATION UPDATE)
DE CC CHEMOKINE ST38 PRECURSOR.
GN LARC.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RP SEQUENCE FROM N.A.
RA UTANS-SCHNEITZ U., LOREZ H., KLINKERT W.E.F., DA SILVA J.,
RA LESSLAUER W.;
RT "A novel rat CC chemokine, identified by targeted differential
display, is upregulated in brain inflammation."
RL J. NEUROIMMUNOL. 0:0-0(1998).
RN [2]
RP SEQUENCE FROM N.A.
RA VILLARES R.;
RL SUBMITTED (JUL-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; AF053313; G3551819; -.
DR EMBL; AJ007862; E1312757; -.
KW SIGNAL. 1 27 POTENTIAL.
FT CHAIN 28 97 CC CHEMOKINE ST38.
SQ SEQUENCE 97 AA; 10826 MW; 053405BD CRC32;

Query Match 72.6%; Score 69; DB 11; Length 97;
Best Local Similarity 70.0%; Pred. No. 1.11e-02;
Matches 7; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 74 VCADPKQNVW 83
QY 2 ICADPTQKWV 11

RESULT 9 PRELIMINARY; PRT; 120 AA.
ID O15467;
AC O15467;
DT 01-JAN-1998 (TREMBREL. 05, CREATED)
DT 01-JAN-1998 (TREMBREL. 05, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBREL. 08, LAST ANNOTATION UPDATE)
DE IL-10-INDUCIBLE CHEMOKINE.
GN ILINCK OR SCVA16.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RA HEDRICK J.A., HELMS A., GORMAN D., ZLOTNIK A.;
RL SUBMITTED (NOV-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=LIVER;
RA SHODAI K., HIESHIMA K., FUKUDA S., IIO M., MIURA R., IWAI T.,
RA YOSHIE O., NOMIYAMA H.;
RL BIOCHIM. BIOPHYS. ACTA 0:0-0(1998).
RN [3]
RP SEQUENCE FROM N.A.
RA NOMIYAMA H.;
RT "Structure of a region of 181 kb containing five CC chemokine
genes."
RL SUBMITTED (AUG-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [4]
RP SEQUENCE FROM N.A.
RX MEDLINE; 98308096.
RA YOUN B.S., ZHANG S., BROXMEYER H.E., ANTOL K., FRASER M.J. JR.,
RA HANGOC G., KWON B.S.;
RT "Isolation and characterization of LMC, a novel lymphocyte and
monocyte chemoattractant human CC chemokine, with myelosuppressive
activity."
RL BIOCHEM. BIOPHYS. RES. COMMUN. 247:217-222(1998).
DR EMBL; U91746; G2581781; -.
DR EMBL; AB007454; D1024963; -.
DR EMBL; AF088219; G3719365; -.

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DR EMBL; AF055467; G3395776; -.
DR PFAM; PF00048; 118; 1.
KW SIGNAL.
SQ SEQUENCE 120 AA; 13600 MW; A079DF66 CRC32;

Query Match 72.6%; Score 69; DB 4; Length 120;
Best Local Similarity 50.0%; Pred. No. 1.11e-02;
Matches 6; Conservative 4; Mismatches 2; Indels 0; Gaps 0;

Db 74 EVCTNPNDWQV 85
QY 1 EICADPTQKWQ 12

RESULT 10
ID O00585 PRELIMINARY; PRT; 134 AA.
AC O00585;
DT 01-JUL-1997 (TREMREL. 04, CREATED)
DT 01-JUL-1997 (TREMREL. 04, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
DE BETA CHEMOKINE EXODUS-2.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RN SEQUENCE FROM N.A.
RP HROMAS R.A., GRAY P., KLEMSZ M., FIFE K., BROXMEYER H.;
RL SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBBJ DATA BANKS.
RN [2]
RN SEQUENCE FROM N.A.
RX MEDLINE; 97400322.
RA HEDRICK J.A., ZLOTNIK A.;
RT "Identification and characterization of a novel beta chemokine
RT containing six conserved cysteines.";
RL J. IMMUNOL. 159:1589-1593(1997).
RN [3]
RN SEQUENCE FROM N.A.
RA HEDRICK J.A., ZLOTNIK A.;
RL SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBBJ DATA BANKS.
RN [4]
RN SEQUENCE FROM N.A.
RA NAGIRA M., IMAI T., HIESHIMA K., KUSUDA J., RIDANFAA M., TAKAGI S.,
RA NISHIMURA M., KAKIZAKI M., NOMIYAMA H., YOSHIE O.;
RL SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBBJ DATA BANKS.
DR EMBL; U88320; G2196920; -.
DR EMBL; AF001979; G2624925; -.
DR EMBL; AB002409; D1022673; -.
DR PFAM; PF00048; 118; 1.
SQ SEQUENCE 134 AA; 14646 MW; FE86A239 CRC32;

Query Match 72.6%; Score 69; DB 4; Length 134;
Best Local Similarity 56.7%; Pred. No. 1.11e-02;
Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 73 ELCDPKELWQV 84
QY 1 EICADPTQKWQ 12

RESULT 11
ID O43646 PRELIMINARY; PRT; 91 AA.
AC O43646;
DT 01-JUN-1998 (TREMREL. 06, CREATED)
DT 01-JUN-1998 (TREMREL. 06, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
DE RANTES PRECURSOR.
OS SCY5.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RN SEQUENCE FROM N.A.
RA JANG J.S., KIM B.E.;

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RL SUBMITTED (JAN-1998) TO EMBL/GENBANK/DBBJ DATA BANKS.
RN [2]
RN SEQUENCE FROM N.A.
RA NOMIYAMA H.;
RT "Structure of a region of 181 kb containing five CC chemokine
RT genes.";
RL SUBMITTED (AUG-1998) TO EMBL/GENBANK/DBBJ DATA BANKS.
DR EMBL; AF043341; G2905632; -.
DR EMBL; AF088219; G3719366; -.
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
KW SIGNAL.
FT SIGNAL. 1 23 POTENTIAL.
FT CHAIN 24 91 RANTES.
SQ SEQUENCE 91 AA; 9990 MW; CF404FAD CRC32;

Query Match 70.5%; Score 67; DB 4; Length 91;
Best Local Similarity 50.0%; Pred. No. 2.94e-02;
Matches 6; Conservative 4; Mismatches 2; Indels 0; Gaps 0;

Db 71 QVCANPEKKWVR 82
QY 1 EICADPTQKWQ 12

RESULT 12
ID O62812 PRELIMINARY; PRT; 97 AA.
AC O62812;
DT 01-AUG-1998 (TREMREL. 07, CREATED)
DT 01-AUG-1998 (TREMREL. 07, LAST SEQUENCE UPDATE)
DT 01-AUG-1998 (TREMREL. 07, LAST ANNOTATION UPDATE)
DE INTERLEUKIN-8 (FRAGMENT).
GN IL-8.
OS EQUUS CABALLUS (HORSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC PERISSODACTYLA; EQUIDAE; EQUUS.
RN [1]
RN SEQUENCE FROM N.A.
RC TISSUE-BRONCHOALVEOLAR TISSUE;
RA FRANCHINI M.;
RL SUBMITTED (APR-1998) TO EMBL/GENBANK/DBBJ DATA BANKS.
DR EMBL; AF062377; G3126973; -.
FT NON_TER 97
SQ SEQUENCE 97 AA; 10742 MW; 00396FBF CRC32;

Query Match 69.5%; Score 66; DB 6; Length 97;
Best Local Similarity 58.3%; Pred. No. 4.76e-02;
Matches 7; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Db 75 EYCLNPHTKWQV 86
QY 1 EICADPTQKWQ 12

RESULT 13
ID Q99664 PRELIMINARY; PRT; 95 AA.
AC Q99664;
DT 01-MAY-1997 (TREMREL. 03, CREATED)
DT 01-MAY-1997 (TREMREL. 03, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
DE CHEMOKINE EXODUS.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RN SEQUENCE FROM N.A.
RC TISSUE-PANCREAS;
RX MEDLINE; 97275143.
RA HROMAS R., GRAY P.W., CHANTRY D., GODISKA R., KRATHWOHL M., FIFE K.,
RA BELL G.I., TAKEDA J., ARONICA S., GORDON M., COOPER S.,
RA BROXMEYER H.E., KLEMSZ M.J.;
RT "Cloning and characterization of exodus, a novel beta-chemokine.";
RL BLOOD 89:3315-3322(1997).
DR EMBL; U64197; G1778717; -.

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DR PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM: PF00048; i18; 1.
SQ SEQUENCE 95 AA; 10691 MW; 1526B4C0 CRC32;

Query Match 68.4%; Score 65; DB 4; Length 95;
Best Local Similarity 60.0%; Pred. No. 7.66e-02;
Matches 6; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 72 VCANPKQTWV 81
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QY 2 ICADPTQKWV 11

RESULT 14 PRELIMINARY; PRT; 96 AA.

ID P97884
AC P97884;
DT 01-MAY-1997 (TREMBLREL. 03, CREATED)
DT 01-MAY-1997 (TREMBLREL. 03, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE CC CHEMOKINE EXODUS.
OS RATTUS NORVEGICUS (RAT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
OC SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN-SPRAGUE-DAWLEY;
RA KELNER G.S., MACIEJEWSKI-LENOIR D., LEE E.D., MAKI R.A.;
RL SUBMITTED (FEB-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN-FISHER 344; TISSUE-BRAIN;
RA UTANS-SCHNEITZ U., LOREZ H., KLINKERT W.E.F., DA SILVA J.,
RA LESSLAUER W.;
RT "A novel rat CC chemokine, identified by targeted differential
RT display, is upregulated in brain inflammation."
RL J. NEUROIMMUNOL. 0:0-0(1998).
DR EMBL: U0447; G1899246; -
DR EMBL: AF053312; G3551817; -
DR PFAM: PF00048; i18; 1.
KW SIGNAL.
SQ SEQUENCE 96 AA; 10875 MW; 3FC09DD8 CRC32;

Query Match 68.4%; Score 65; DB 11; Length 96;
Best Local Similarity 70.0%; Pred. No. 7.66e-02;
Matches 7; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Db 73 VCANPKQTWV 82
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QY 2 ICADPTQKWV 11

RESULT 15 PRELIMINARY; PRT; 133 AA.

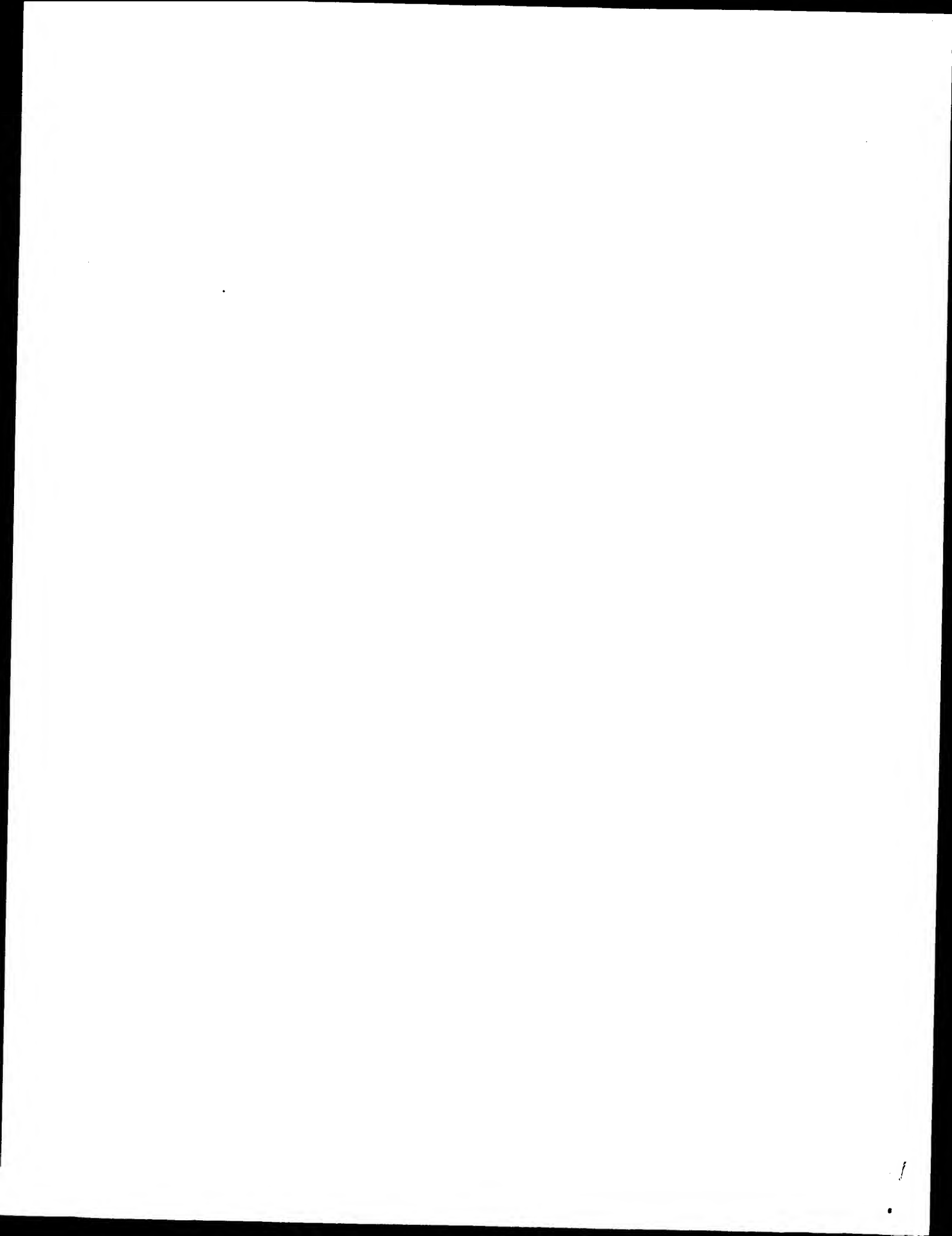
ID O09006
AC O09006;
DT 01-JUL-1997 (TREMBLREL. 04, CREATED)
DT 01-AUG-1998 (TREMBLREL. 07, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE BETA CHEMOKINE EXODUS-2.
GN SCFA21.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-TOTAL FETUS;
RX MEDLINE; 97444139;
RA HROMAS R., KIM C.H., KLENSZ M., KRATHWOHL M., FIFE K., COOPER S.,
RA SCHNIZLEIN-BICK C., BROXMEYER H.E.;
RT "Isolation and characterization of Exodus-2, a novel C-C chemokine
RT with a unique 37-amino acid carboxyl-terminal extension."
RL J. IMMUNOL. 159:2554-2558(1997).
RN [2]
RP SEQUENCE FROM N.A.

RC TISSUE-TOTAL FETUS;
RA HROMAS R.A.;
RL SUBMITTED (JUN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL: U88322; G3169697; -
DR MGD: MGI:1097677; SCYA21.
DR PFAM: PF00048; i18; 1.
SQ SEQUENCE 133 AA; 14600 MW; B34A5E22 CRC32;

Query Match 68.4%; Score 65; DB 11; Length 133;
Best Local Similarity 58.3%; Pred. No. 7.66e-02;
Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 73 ELCANPEEGWVQ 84
:|||||
QY 1 EICADPTQKWVQ 12

Search completed: Fri Feb 4 17:46:47 2000
Job time : 69 secs.



TTIIN, HEART ISFORM N	1.23e+00
LYMPHOTACTIN PRECURSOR	2.87e+00
INTERLEUKIN-8 (FRAGMENT)	4.34e+00
B LYMPHOCYTE CHEMOATTR	4.34e+00
T-TYPE CALCIUM CHANNEL	4.34e+00
LOW VOLTAGE-ACTIVATED,	4.34e+00
TTIIN (FRAGMENT).	4.34e+00
PYRUVATE FORMATE-LYASE	6.55e+00
RADIAL SPOKEHEAD.	6.55e+00
RESISTANCE GENE HOMOLO	6.55e+00
MHC CLASS 1 PROTEIN MO	9.82e+00
SERINE RICH PROTEIN HO	9.82e+00
APS, COMPLETE CDS.	9.82e+00
ENVELOPE GLYCOPROTEIN	9.82e+00
NP47 PROTEIN.	9.82e+00
T27C5 3 PROTEIN.	1.47e+01
ECO Q PROTEIN (FRAGMENT)	1.47e+01
T27C5.2 PROTEIN.	1.47e+01
RAPHILIN-3A RELATED P	1.47e+01
REVERSE TRANSCRIPTASE-	1.47e+01
REVERSE TRANSCRIPTASE	1.47e+01
T27D8 3 PROTEIN.	1.47e+01
SIMILAR TO VACCINIA VI	2.18e+01
ENVELOPE GLYCOPROTEIN	2.18e+01
ENVELOPE GLYCOPROTEIN	2.18e+01

ALIGNMENTS

RESULT	1	PRELIMINARY;	PRT:	101 AA.
ID	O93238			
AC	O93238.			
DT	01-NOV-1998	(TREMBLREL. 08, CREATED)		
DT	01-NOV-1998	(TREMBLREL. 08, LAST SEQUENCE UPDATE)		
DT	01-NOV-1998	(TREMBLREL. 08, LAST ANNOTATION UPDATE)		
CC	CC CHEMOKINE-1.			
DE	CC CHEMOKINE-1.	(COMMON CARP)		
DE	CYPRINUS CARPIO.	(COMMON CARP)		
OS	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA;	ACTINOPTERYGII; NEOPTERYGII;		
OC	TELEOSTEI; EUTELEOSTEI; OSTARIOPHYSI;	CYPRINIFORMES; CYPRINOIDEA;		
OC	CYPRINIDAE; CYPRININAE;	CYPRINUS.		
[1]				
RN	SEQUENCE FROM N.A.			
RP	FUJIKI K., NAKAO M., SHIN D., YANO T.;			
RT	"CDNA cloning of a carp CC chemokine homologous to mammalian			
RT	eotaxins.";			
RL	SUBMITTED (JAN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.			
RL	EMBL; AB010469; D1032417; -			
SO	SEQUENCE 101 AA; 11266 MW; 9CFBD540 CRC32;			

Query Match	76.0%;	Score 76;	DB 13;	Length 101;
Best Local Similarity	66.7%;	Pred. No. 2.23e-03;		
Matches	3;	Mismatches 1;	Indels 0;	Gaps 0;
8. Conservative				

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db      72 EFCDPKLRWVK 83
ov      1 EICADPKRWR 12
         | : | : | : | :

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RESULT 2
PRELIMINARY: 92 AA.
PRT:

DT	088430;
DT	01-NOV-1998 (TREMBLREL. 08, CREATED)
DT	01-NOV-1998 (TREMBLREL. 08, LAST SEQUENCE UPDATE)
DT	01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)

MUS MUSCULUS (MOUSE).
EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
SCIUROGNATHI. MURIDAE; MURINAE; MUS.

RN	[I]
RP	SEQUENCE FROM N.A.
RC	TISSUE=LIVER;
RX	MEDLINE; 98353531.
RA	SCHANIEL C., PARDA

RX
MEDLINE; 98353531.
CUANIER C. PAROLI F. SALLUSTO F., SPELETAS M., RUEDL C.,

21	62	62.0	26926	4	Q10466
22	60	60.0	97	13	Q57411
23	59	59.0	97	6	O62812
24	59	59.0	109	11	O55038
25	59	59.0	319	4	O43497
26	59	59.0	2254	11	O54898
27	59	59.0	4650	4	O15598
28	58	58.0	332	1	O28318
29	58	58.0	552	5	O46178
30	58	58.0	1422	10	O23533
31	57	57.0	93594	7	Q95394
32	57	57.0	522	5	O61090
33	57	57.0	632	4	O14492
34	57	57.0	859	14	O97013
35	57	57.0	928	2	O86395
36	56	56.0	186	5	O45847
37	56	56.0	203	14	O67634
38	56	56.0	224	5	O45846
39	56	56.0	302	11	O54880
40	56	56.0	431	2	O34211
41	56	56.0	448	2	O32385
42	56	56.0	982	5	Q93290
43	55	55.0	225	14	Q84150
44	55	55.0	854	14	Q72744
45	55	55.0	854	14	Q97016

```
*****  
MPSrch_pp protein - protein database search, using Smith-Waterman algorithm  
Run on: Fri Feb 4 17:51:34 2000; MasPar time 5.03 Seconds  
          130.146 Million cell updates/sec  
          Molecular output not generated.  
*****
```

```
>US-09-150-813-67
(1-12) from US09150813.pcp
100
Perfect Score:
Sequence: 1 EICADPKERWVR 12
```

Scoring table: PAM 150
Gap 15

Searched: 179066 seqs, 54579741 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: sptrembl9

spstreml9
1:sp_archaea 2:sp_bacteria 3:sp_fungi 4:sp_human
5:sp_invertebrate 6:sp_mammal 7:sp_mhc 8:sp_organelle
9:sp_phage 10:sp_plant 11:sp_rodent 12:sp_unclassified
13:sp_vertebrate 14:sp_virus

statistics: Mean 26.277; Variance 37.848; scale 0.694

pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query		DB	ID	Description	Pred. No.
		Match	Length				
1	76	75.0	101	13	Q93238	CC CHEMOKINE-1	2.23e-03
2	75	75.0	92	11	O88430	CC CHEMOKINE ABCD-1.	3.58e-03
3	75	75.0	395	11	O35188	NEUTROACTIN.	3.58e-03
4	75	75.0	395	11	O35933	FRCTALININ.	3.58e-03
5	75	75.0	397	4	P78423	CX3C CHEMOKINE PRECURS	3.58e-03
6	74	74.0	97	11	O89093	CC CHEMOKINE ST38 PREC	5.72e-03
7	73	73.0	93	4	O00626	MACROPHAGE-DERIVED CHE	9.11e-03
8	73	73.0	134	4	O00585	BETA CHEMOKINE EXODUS-	1.45e-02
9	72	72.0	91	4	O43646	RANTES PRECURSOR.	1.45e-02
10	72	72.0	95	14	Q98158	ORF K6.	1.45e-02
11	72	72.0	96	11	P97884	CC CHEMOKINE EXODUS.	3.62e-02
12	70	70.0	95	4	Q99664	CHEMOKINE EXODUS.	3.62e-02
13	67	67.0	80	4	O14745	L178 ALPHA BETA PRECUR	1.40e-01
14	65	65.0	119	4	O00175	MP1F-2.	3.38e-01
15	65	65.0	120	4	O35457	IL-10- INDUCIBLE CHEMOK	3.38e-01
16	63	63.0	101	13	Q93442	LICA-1 PROTEIN PRECURS	8.04e-01
17	63	63.0	104	13	Q73942	K60 PROTEIN PRECURSOR.	8.04e-01
18	63	63.0	760	3	Q99126	CHITIN SYNTHETASE I.	8.04e-01
19	62	62.0	133	11	O09002	SMALL INDUCIBLE CYTOKI	1.23e+00
20	62	62.0	133	11	O09005	BETA CHEMOKINE EXODUS-	1.23e+00

```

RA SHIMIZU T., SEIDL T., ANDERSSON J., MELCHERS F., ROLINK A.G.,
RA SIDERAS P.;
RT "Activated murine B lymphocytes and dendritic cells produce a novel
RT CC chemokine which acts selectively on activated T cells.";
RL J. EXP. MED. 188:451-463(1998).
DR EMBL; AF052505; G3378116; -.
SQ SEQUENCE 92 AA, 10302 MW; BC7219A0 CRC32;

Query Match
Best Local Similarity 58.3%; Score 75; DB 11; Length 92;
Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 74 FCADPKRQWVK 85
QY 1 EICADPKRWVR 12

RESULT 3
ID O35188 PRELIMINARY; PRT; 395 AA.
AC O35188;
DT 01-JAN-1998 (TREMREL. 05, CREATED)
DT 01-JAN-1998 (TREMREL. 05, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
DE NEUROFACIN.
OS SCYDI.
GN MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 97320499.
RA PAN Y., CLARE L., HONG Z., DOLICH S., DEEDS J., GONZALO J., VATH J.,
RA GOSSELIN M., MA J., DUSSAULT B., WOOLF B., ALPERIN A., CULPEPPER J.,
RA GUTIERREZ-RAMOS J.C., GEARING D.;
RT "Neurotactin, a membrane-anchored chemokine upregulated in brain
RT inflammation.";
RL NATURE 387:611-617(1997).
DR EMBL; AF010586; G2317698; -.
DR MGD; MGI:1097153; SCYD1.
DR PFAM; PF00048; i18; 1.
SQ SEQUENCE 395 AA, 42098 MW; E3CD0612 CRC32;

Query Match
Best Local Similarity 75.0%; Score 75; DB 11; Length 395;
Matches 8; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 73 FCADPKRQWVK 83
QY 2 ICADPKRWVR 12

RESULT 4
ID O35933 PRELIMINARY; PRT; 395 AA.
AC O35933;
DT 01-JAN-1998 (TREMREL. 05, CREATED)
DT 01-JAN-1998 (TREMREL. 05, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
DE FRACTALKINE.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN-BALB/C; TISSUE-BRAIN;
RA ROSSI D., HARDIMAN G., COPELAND N., GILBERT D.J., JENKINS N.,
RA ZLOTNIK A., BAZAN J.F.;
RL SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; U92565; G2459677; -.
DR PFAM; PF00048; i18; 1.
SQ SEQUENCE 395 AA, 42040 MW; 3997A113 CRC32;

Query Match
Best Local Similarity 75.0%; Score 75; DB 11; Length 395;
Matches 8; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 73 FCADPKRQWVK 83
QY 2 ICADPKRWVR 12

RESULT 5
ID P78423 PRELIMINARY; PRT; 397 AA.
AC P78423; O00672;
DT 01-MAY-1997 (TREMREL. 03, CREATED)
DT 01-MAY-1997 (TREMREL. 03, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
DE CX3C CHEMOKINE PRECURSOR.
GN A-152E5.2.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 9717111.
RA BAZAN J.F., BACON K.B., HARDIMAN G., WANG W., SOO K., ROSSI D.,
RA GRAVES D.R., ZLOTNIK A., SCHALL T.J.;
RT "A new class of membrane-bound chemokine with a CX3C motif.";
RL NATURE 385:640-644(1997).
RN [2]
RP SEQUENCE FROM N.A.
RA ADAMS M.D., LOFTUS B.J., ZHOU L., CROSBY M., FUHRMANN J., MASON T.M.,
RA BRANDON R., KIM U.J., KERLAVAGE A.R., VENTER J.C.;
RT "Homo sapiens Chromosome 16 BAC clone C1987SK-A-152E5.";
RL SUBMITTED (JUN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; U91835; G1899259; -.
DR EMBL; U84487; G1888523; -.
DR EMBL; AC004382; G3252821; -.
DR PFAM; PF00048; i18; 1.
KW SIGNAL.
FT SIGNAL 1 24 POTENTIAL.
FT CHAIN 25 397 CX3C CHEMOKINE.
SQ SEQUENCE 397 AA, 42202 MW; C8093D7D CRC32;

Query Match
Best Local Similarity 75.0%; Score 75; DB 4; Length 397;
Matches 8; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 73 FCADPKRQWVK 83
QY 2 ICADPKRWVR 12

RESULT 6
ID O89093 PRELIMINARY; PRT; 97 AA.
AC O89093;
DT 01-NOV-1998 (TREMREL. 08, CREATED)
DT 01-NOV-1998 (TREMREL. 08, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
DE CC CHEMOKINE S138 PRECURSOR.
GN LARC.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RP SEQUENCE FROM N.A.
RA UTANS-SCHNEITZ U., LOREZ H., KLINKERT W.E.F., DA SILVA J.,
RA LESSLAUER W.;
RT "A novel rat CC chemokine, identified by targeted differential
RT display, is upregulated in brain inflammation.";
RL J. NEUROIMMUNOL. 0:0-0(1998).
RN [2]
RP SEQUENCE FROM N.A.
RA VILLARES R.;
RL SUBMITTED (JUL-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; AF053313; G3551819; -.
DR EMBL; AJ007862; E1312757; -.

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KW SIGNAL. 1 27 POTENTIAL.
 FT CHAIN 28 97 CC CHEMOKINE ST38.
 CSQ SEQUENCE 97 AA; 10826 MW; 053405BD CRC32;
 Query Match 74.0%; Score 74; DB 11; Length 97;
 Best Local Similarity 63.6%; Pred. No. 5.72e-03;
 Matches 7; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
 Db 74 VCADPKQNVK 84
 QY 2 ICADPKRWVR 12
 RESULT 7
 ID O00626 PRELIMINARY; PRT; 93 AA.
 AC O00626;
 DT 01-JUL-1997 (TREMREL. 04, CREATED)
 DT 01-JUL-1997 (TREMREL. 04, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
 DE MACROPHAGE-DERIVED CHEMOKINE PRECURSOR.
 GN MDC OR A-152E5.1.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
 OC CATARRHINI; HOMINIDAE; HOMO.
 [1]
 RN SEQUENCE FROM N.A.
 RP CHANG M.S., MCNINCH J., ELIAS III C., MANTHEY C.J., SOZZANI S., ALLAVENA P.,
 RA GODISKA R., CHANTY D., RAPORT C.J.,
 RA MANTOVANI A., GRAY P.W.;
 RA J. EXP. MED. 185:0-0(0).
 [2]
 RN SEQUENCE FROM N.A.
 RP CHANG M.S., MCNINCH J., ELIAS III C., MANTHEY C.J., GROSSHANS D.,
 RA MENG T., BOONE T., ANDREW D.P.;
 RA SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 [3]
 RN SEQUENCE FROM N.A.
 RP ADAMS M.D., LOFTUS B.J., ZHOU L., CROSBY M., FUHRMANN J., MASON T.M.,
 RA BRANDON R., KIM U.J., KERLAVAGE A.R., VENTER J.C.;
 RT "Homo sapiens Chromosome 16 BAC clone CIT987SK-A-152E5.";
 RL SUBMITTED (JUN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; U831171; G1931581;
 DR EMBL; U83239; G2062425;
 DR EMBL; AC004382; G3252820;
 DR PFAM; PF00048; I18; 1.
 KW SIGNAL. 1 24 POTENTIAL.
 FT CHAIN 25 93 MACROPHAGE-DERIVED CHEMOKINE.
 FT SEQUENCE 93 AA; 10580 MW; 65EA63D2 CRC32;
 QY SEQUENCE 93 AA; 10580 MW; 65EA63D2 CRC32;
 Query Match 73.0%; Score 73; DB 4; Length 93;
 Best Local Similarity 66.7%; Pred. No. 9.11e-03;
 Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;
 Db 74 EICADPRVWVK 85
 QY 1 EICADPKRWVR 12
 RESULT 8
 ID O00585 PRELIMINARY; PRT; 134 AA.
 AC O00585;
 DT 01-JUL-1997 (TREMREL. 04, CREATED)
 DT 01-JUL-1997 (TREMREL. 04, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
 DE BETA CHEMOKINE EXODUS-2.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
 OC CATARRHINI; HOMINIDAE; HOMO.
 [1]
 RN SEQUENCE FROM N.A.
 RP HROMAS R.A., GRAY P., KLEMSZ M., FIFE K., BROXMEYER H.;
 RA SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

DT 01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
 DE 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 OS ORF K6.
 OC KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS.
 OC VIRUSES; DSDNA VIRUSES, NO RNA STAGE; HERPESVIRIDAE;
 OC GAMMAHERPESVIRINAE; RHADINOVIRUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 97094384.
 RA MOORE P.S., BASHOFF C., WEISS R.A., CHANG Y.;
 RT "Molecular mimicry of human cytokine and cytokine response pathway
 RT genes by KSHV."
 RL SCIENCE 274:1739-1744(1996).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 97121480.
 RA RUSSO J.J., BOHENZKY R.A., CHIEN M.C., CHEN J., YAN M., MADDALENA D.,
 RA PARRY J.P., PERUZZI D., EDELMAN I.S., CHANG Y., MOORE P.S.;
 RT "Nucleotide sequence of the Kaposi sarcoma-associated herpesvirus
 RT (HRV8)."
 RL PROC. NATL. ACAD. SCI. U.S.A. 93:14862-14867(1996).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 97296220.
 RA RUSSO J.J., BOHENZKY R.A., CHIEN M.C., CHEN J., YAN M., MADDALENA D.,
 RA PARRY J.P., PERUZZI D., EDELMAN I.S., CHANG Y., MOORE P.S.;
 RL SUBMITTED (OCT-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [4]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 97296220.
 RA RUSSO J.J., BOHENZKY R.A., CHIEN M.C., CHEN J., YAN M., MADDALENA D.,
 RA PARRY J.P., PERUZZI D., EDELMAN I.S., CHANG Y., MOORE P.S.;
 RL SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [6]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 97296220.
 RA NEIPEL F., ALBRECHT J.C., FLECKENSTEIN B.;
 RT "Cell-homologous genes in the Kaposi's sarcoma-associated
 RT rhadinovirus human herpesvirus 8: determinants of its
 RT pathogenicity?"
 RL J. VIROL. 71:4187-4192(1997).
 RN [7]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 97296220.
 RA SUN K., LIN S.-F., MILLER G.;
 RL SUBMITTED (SEP-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; U75698; G1718266;
 DR EMBL; U74585; G1658273;
 DR EMBL; U93872; G2246546;
 DR EMBL; U11366; G3551763;
 DR PFAM; PF00048; i18; 1.
 KW HYPOTHETICAL PROTEIN.
 SQ SEQUENCE 95 AA; 10485 MW; 5283348D CRC32;

Query Match 72.0%; Score 72; DB 14; Length 95;
 Best Local Similarity 66.7%; Pred. No. 1.45e-02;
 Matches 8; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Db 74 QICADPSKNVVR 85
 :|||||
 QY 1 EICADPKRWVR 12

RESULT 11
 ID P97884 PRELIMINARY; PRT; 96 AA.
 AC P97884;
 DT 01-MAY-1997 (TREMBLREL. 03, CREATED)
 DT 01-MAY-1997 (TREMBLREL. 03, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 OS CC CHEMOKINE EXODUS.
 OS RATTUS NORVEGICUS (RAT).

OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
 OC SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX STRAIN-SPRAGUE-DAWLEY;
 RA KELNER G.S., MACIEJEWSKI-LENOIR D., LEE E.D., MAKI R.A.;
 RL SUBMITTED (FEB-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [2]
 RP SEQUENCE FROM N.A.
 RX STRAIN-FISHER 344; TISSUE-BRAIN;
 RA UTANS-SCHNEITZ U., LOREZ H., KLINKERT W.E.F., DA SILVA J.,
 RA LESSLAUER W.;
 RT "A novel rat CC chemokine, identified by targeted differential
 RT display, is upregulated in brain inflammation."
 RL J. NEUROIMMUNOL. 0:0-0(1998).
 DR EMBL; U90447; G1899246;
 DR EMBL; AF053312; G3551817;
 DR PFAM; PF00048; i18; 1.
 KW SIGNAL.
 SQ SEQUENCE 96 AA; 10875 MW; 3FC09DD8 CRC32;

Query Match 72.0%; Score 72; DB 11; Length 96;
 Best Local Similarity 63.6%; Pred. No. 1.45e-02;
 Matches 7; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 73 VCAPDKQIWKV 83
 :|||||
 QY 2 ICADPKRWVR 12

RESULT 12
 ID Q99664 PRELIMINARY; PRT; 95 AA.
 AC Q99664;
 DT 01-MAY-1997 (TREMBLREL. 03, CREATED)
 DT 01-MAY-1997 (TREMBLREL. 03, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE CHEMOKINE EXODUS.
 OS EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
 OC CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX TISSUE-PANCREAS;
 RX MEDLINE; 97275143.
 RA HROMAS R., GRAY P.W., CHANTRY D., GODISKA R., KRATHWOHL M., FIFE K.,
 RA BELL G.I., TAKEDA J., ARONICA S., GORDON M., COOPER S.,
 RA BROMMEYER H.E., KLEMSZ M.J.;
 RT "Cloning and characterization of exodus, a novel beta-chemokine."
 RL BLOOD 89:3315-3322(1997).
 DR EMBL; U64197; G1778717;
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 SQ SEQUENCE 95 AA; 10691 MW; 1526B4C0 CRC32;

Query Match 70.0%; Score 70; DB 4; Length 95;
 Best Local Similarity 54.5%; Pred. No. 3.62e-02;
 Matches 6; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 72 VCANPKQTWVK 82
 :|||||
 QY 2 ICADPKRWVR 12

RESULT 13
 ID Q14745 PRELIMINARY; PRT; 80 AA.
 AC Q14745;
 DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
 DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
 DT 01-JAN-1999 (TREMBLREL. 09, LAST ANNOTATION UPDATE)
 DE L078 ALPHA BETA PRECURSOR (FRAGMENT).
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
 OC CATARRHINI; HOMINIDAE; HOMO.


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RN SEQUENCE FROM N.A.
RC TISSUE=BRAIN;
RA ISHIZUKA K., IGATA-YI R., NARUSE K., NAKASHIMA H., OHUCHI K.,
RA KATSURAGI S., KIN Y., OHMOTO Y., NOMIYAMA H., IIO M., MIURA R.,
RA MIYAKAWA T.;
RL SUBMITTED (AUG-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; D63785; D1010501; -.
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PAM; PF00048; i18; 1.
KW SIGNAL.
FT NON_TER 1 1
FT SIGNAL <1 16
FT CHAIN 17 >80
FT CHAIN LD78 ALPHA BETA.
FT NON_TER 80
SQ SEQUENCE 80 AA; 8857 MW; 3F87FIC6 CRC32;

Query Match 67.0%; DB 4; Length 80;
Best Local Similarity 58.3%; Pred. No. 1.40e-01;
Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 65 QVCADPSEWVQ 76
QY 1 EICADPKRWVR 12

RESULT 14 PRELIMINARY; PRT; 119 AA.
ID 000175;
AC 000175;
DT 01-JUL-1997 (TREMBLREL. 04, CREATED)
DT 01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE MP1F-2.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN SEQUENCE FROM N.A.
RA PATEL V.P., KREIDER B.L., LI Y., LI H., LEUNG K., SALCEDO T.,
RA NARDELLI B., PIPPALLA V., GENTZ S., THOTAKURA R., PARMELEE D.,
RA GENTZ R., GAROTTA G.;
RL J. EXP. MED. 0:0-0(0).
DR EMBL; U85768; G1916252; -.
DR PAM; PF00048; i18; 1.
SQ SEQUENCE 119 AA; 13119 MW; CDF526F0 CRC32;

Query Match 65.0%; Score 65; DB 4; Length 119;
Best Local Similarity 50.0%; Pred. No. 3.38e-01;
Matches 6; Conservative 5; Mismatches 1; Indels 0; Gaps 0;

Db 72 QFCGDPKQEWVQ 83
QY 1 EICADPKRWVR 12

RESULT 15 PRELIMINARY; PRT; 120 AA.
ID 015467;
AC 015467;
DT 01-JAN-1998 (TREMBLREL. 05, CREATED)
DT 01-JAN-1998 (TREMBLREL. 05, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE TL-10-INDUCIBLE CHEMOKINE.
GN TLINCK OR SCYAL6.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN SEQUENCE FROM N.A.
RA HEDRICK J.A., HELMS A., GORMAN D., ZLOTNIK A.;
RL SUBMITTED (NOV-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
[2]
RN SEQUENCE FROM N.A.
RC TISSUE=LIVER;
RA SHODAI K., HIESHIMA K., FUKUDA S., IIO M., MIURA R., IMAI T.,
RA YOSHIE O., NOMIYAMA H.;
RL BIOCHIM. BIOPHYS. ACTA 0:0-0(1998).
[3]
RN SEQUENCE FROM N.A.
RA NOMIYAMA H.;
RT "Structure of a region of 181 kb containing five CC chemokine
genes.";
RL SUBMITTED (AUG-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
[4]
RN SEQUENCE FROM N.A.
RX MEDLINE; 98308096.
RA YOUN B.S., ZHANG S., BROXMEYER H.E., ANTOL K., FRASER M.J. JR.,
RA HANGOC G., KWON B.S.;
RT "Isolation and characterization of LMC, a novel lymphocyte and
RT monocytic chemoattractant human CC chemokine, with myelosuppressive
activity.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 247:217-222(1998).
DR EMBL; U91746; G2581781; -.
DR EMBL; AB007454; D1024963; -.
DR EMBL; AF088219; G3719365; -.
DR EMBL; AF055467; G3395776; -.
DR PAM; PF00048; i18; 1.
KW SIGNAL.
SQ SEQUENCE 120 AA; 13600 MW; A079DF66 CRC32;

Query Match 65.0%; Score 65; DB 4; Length 120;
Best Local Similarity 41.7%; Pred. No. 3.38e-01;
Matches 5; Conservative 6; Mismatches 1; Indels 0; Gaps 0;

Db 74 EVCNPNDDWVQ 85
QY 1 EICADPKRWVR 12

Search completed: Fri Feb 4 17:52:30 2000
Job time : 56 secs.
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RP SUBUNIT.
RX MEDLINE: 97053697.
RA KIM K.-S., RAJARATHNAM K., CLARK-LEWIS I., SYKES B.D.;
RT "Structural characterization of a monomeric chemokine: monocyte
chemoattractant protein-3";
RL FEBS LETT. 395:277-282(1996).
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, LYMPHOCYTES,
CC BASOPHILS AND EOSINOPHILS. MAY PLAY A ROLE IN NEOPLASIA AND
CC INFLAMMATORY HOST RESPONSES. THIS PROTEIN CAN BIND HEPARIN.
CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM.
CC -!- TISSUE SPECIFICITY: HIGHEST EXPRESSION FOUND IN THE SMALL
CC INTESTINE AND PERIPHERAL BLOOD CELLS. INTERMEDIATE LEVELS SEEN IN
CC THE HEART, PLACENTA, LUNG, SKELETAL MUSCLE, THYMUS, COLON, OVARY,
CC SPINAL CORD AND PANCREAS. LOW LEVELS SEEN IN THE BRAIN, LIVER,
CC SPLEEN AND PROSTATE.
CC -!- INDUCTION: BY INTERFERON GAMMA, MITOGENS AND INTERLEUKIN-1.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC -----
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CC -----
DR EMBL: X99886; E279930; ALT_INIT.
DR EMBL: Y10802; E294088;
DR EMBL: Y16645; E1253690;
DR MIM: 602283;
DR PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM: PF00048; 118; 1.
DR HSSP: P13500; 1DOL.
DR CYTOKINE: CHEMOTAXIS; SIGNAL; HEPARIN-BINDING; INFLAMMATORY RESPONSE;
KW POLYMORPHISM.
FT SIGNAL 1 23 PROBABLE.
FT CHAIN 24 99 MONOCYTE CHEMOTACTIC PROTEIN 2.
FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID.
FT DISULFID 34 59 BY SIMILARITY.
FT DISULFID 35 75 BY SIMILARITY.
FT VARIANT 69 69 K->Q.
SQ SEQUENCE 99 AA; 11246 MW; 5DD5C20 CRC32;

Query Match 98.0%; Score 98; DB 1; Length 99;
Best Local Similarity 91.7%; Pred. No. 3.46e-09;
Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 73 EVCADPKRWVR 84
QY 1 EICADPKRWVR 12

RESULT 2
ID MCP5_MOUSE STANDARD; PRT; 104 AA.
AC Q62401;
DT 01-NOV-1997 (REL. 35, CREATED)
DT 01-NOV-1997 (REL. 35, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 5 PRECURSOR (MCP-5) (MCP-1 RELATED
DE CHEMOKINE).
GN SCYA12 OR MCP5.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE: 97079149.
RA JIA G.-Q., GONZALO J.A., LLOYD C., KREMER L., LU L., MARTINEZ A.C.,
RA WERSHIL B.K., GUTIERREZ-RAMOS J.C.;
RT "Distinct expression and function of the novel mouse chemokine
RT monocyte chemoattractant protein-5 in lung allergic inflammation";
RL J. EXP. MED. 184:1939-1951(1996).

[2]
RN SEQUENCE FROM N.A.
RX MEDLINE: 97149438.
RA SARAFI M.N., GARCIA-ZEPEDA E.A., MACLEAN J.A., CHARO I.F.,
RA LUSTER A.D.;
RT "Murine monocyte chemoattractant protein (MCP)-5: a novel CC
RT chemokine that is a structural and functional homologue of human
RL MCP-1";
RL J. EXP. MED. 185:99-109(1997).
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS EOSINOPHILS, MONOCYTES,
CC AND LYMPHOCYTES BUT NOT NEUTROPHILS. POTENT MONOCYTE ACTIVE
CC CHEMOKINE THAT SIGNALS THROUGH CCR2. INVOLVED IN ALLERGIC
CC INFLAMMATION AND THE HOST RESPONSE TO PATHOGENS AND MAY PLAY A
CC PIVOTAL ROLE DURING EARLY STAGES OF ALLERGIC LUNG INFLAMMATION.
CC -!- SUBUNIT: HOMODIMER (BY SIMILARITY).
CC -!- TISSUE SPECIFICITY: PREDOMINANTLY EXPRESSED IN THE LYMPH NODES AND
CC THYMUS. ALSO FOUND IN THE SALIVARY GLANDS CONTAINING LYMPH NODES,
CC BREAST, HEART, LUNG, BRAIN, SMALL INTESTINE, KIDNEY AND COLON.
CC -!- INDUCTION: BY IFN-GAMMA AND LIPOPOLYSACCHARIDE (LPS).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
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CC -----
DR EMBL: U50712; G1477582;
DR EMBL: U66670; G1881583;
DR MGD: MGI:108224; SCYA12.
DR PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM: PF00048; 118; 1.
DR HSSP: P13500; 1DOL.
DR CYTOKINE: CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE.
KW SIGNAL 1 22 BY SIMILARITY.
FT CHAIN 23 104 MONOCYTE CHEMOTACTIC PROTEIN 5.
FT DISULFID 33 58 BY SIMILARITY.
FT DISULFID 34 74 BY SIMILARITY.
SQ SEQUENCE 104 AA; 11659 MW; 08FA6C35 CRC32;

Query Match 90.0%; Score 90; DB 1; Length 104;
Best Local Similarity 83.3%; Pred. No. 2.70e-07;
Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 72 EICADPKRWVR 83
QY 1 EICADPKRWVR 12

RESULT 3
ID MCP4_HUMAN STANDARD; PRT; 98 AA.
AC Q59616;
DT 15-JUL-1998 (REL. 36, CREATED)
DT 15-JUL-1998 (REL. 36, LAST SEQUENCE UPDATE)
DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 4 PRECURSOR (MCP-4) (MONOCYTE
DE CHEMOTACTIC PROTEIN 4) (CK-BETA10) (NCC-1).
GN SCYA13 OR MCP4 OR NCC1.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RX TISSUE=HEART;
RX MEDLINE: 97113354.
RA GARCIA-ZEPEDA E.A., COMBADIERE C., ROTHENBERG M.E., SARAFI M.N.,
RA LAVIGNE F., HAMID Q., MURPHY P.M., LUSTER A.D.;
RT "Human monocyte chemoattractant protein (MCP)-4 is a novel CC
RT chemokine with activities on monocytes, eosinophils, and basophils
RT induced in allergic and nonallergic inflammation that signals through

the CC chemokine receptors (CCR)-2 and -3.";

J. IMMUNOL. 157:5613-5626(1996).

[2] SEQUENCE FROM N.A., AND SEQUENCE OF 17-98.

TISSUE=FETAL;

CC MEDLINE: 96235049.

UGUCCIONI M., LOET-SCHER P., FORSSMANN U., DEWALD B., LI H., LIMA S.H.,

LI Y., KREIDER B., GAROTTA G., THELEN M., BAGGIOLINI M.;

"Monocyte chemotactic protein 4 (MCP-4), a novel structural and

functional analogue of MCP-3 and eotaxin.";

J. EXP. MED. 183:2379-2384(1996).

[3] SEQUENCE FROM N.A., AND SEQUENCE OF 22-33.

TISSUE=FETAL;

CC MEDLINE: 97341179.

BERKHOUT T.A., SARAU H.M., MOORES K., WHITE J.R., ELSHOUBAGY N.,

APPELBAUM E., REAPE T.J., BRAUNER M., MAKWANA J., FOLEY J.J.,

SCHMIDT D.B., IMBURGIA C., MACNULTY D., MATTHEWS J., O'DONNELL K.,

O'SHANNESY D., SCOTT M., GROOT P.H.E., MACPHEE C.;

"Cloning, in vitro expression, and functional characterization of a

novel human CC chemokine, and functional characterization of MCP

family (MCP-4) that binds and signals through the CC chemokine

receptor 2B.";

receptor 2B.";

J. BIOL. CHEM. 272:16404-16413(1997).

[4]

SEQUENCE FROM N.A.

RA DANTE M., GIBSON A.;

SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

[5]

SEQUENCE FROM N.A.

TISSUE=LUNG;

RA POWER C.A., MEYER A., RISON S.C.G., GUYE-COULIN F., WELLS T.N.C.;

SUBMITTED (DEC-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, LYMPHOCYTES,

BASOPHILS AND EOSINOPHILS, BUT NOT NEUTROPHILS. SIGNALS THROUGH

CCR2B AND CCR3 RECEPTORS. PLAYS A ROLE IN THE ACCUMULATION OF

LEUKOCYTES AT BOTH SIDES OF ALLERGIC AND NONALLERGIC INFLAMMATION.

MAY BE INVOLVED IN THE RECRUITMENT OF MONOCYTES INTO THE ARTERIAL

WALL DURING THE DISEASE PROCESS OF ARTERIOSCLEROSIS. MAY PLAY A

ROLE IN THE MONOCYTE ATTRACTION IN TISSUES CHRONICALLY EXPOSED TO

EXOGENOUS PATHOGENS.

CC -!- MASS SPECTROMETRY: MW=9314; MW_ERR=30; METHOD=MALDI; RANGE=17-98.

CC -!- MASS SPECTROMETRY: MW=8760; MW_ERR=30; METHOD=MALDI; RANGE=22-98.

CC -!- MASS SPECTROMETRY: MW=8575; MW_ERR=30; METHOD=MALDI; RANGE=24-98.

CC -!- INDUCTION: BY INTERLEUKIN-1 AND TNF-ALPHA.

CC -!- TISSUE SPECIFICITY: WIDELY EXPRESSED. FOUND IN SMALL INTESTINE,

THYMUS, COLON, LUNG, TRACHEA, STOMACH AND LYMPH NODE. LOW LEVELS

CC -!- SEEN IN THE PULMONARY ARTERY SMOOTH MUSCLE CELLS.

CC -!- THIS PROTEIN CAN BIND HEPARIN.

CC -!- PTM: ONE MAJOR ISOFORM MCP-4, AND TWO MINOR ISOFORMS (LA)MCP-4 AND

(FNPGLA)MCP-4 ARE PRODUCED BY DIFFERENTIAL SIGNAL CLEAVAGE.

CC -!- (LA)MCP-4 IS ABOUT 30 FOLD LESS ACTIVE THAN MCP-4.

CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE

C-C) (CHEMOKINE CC).

CC -----

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DR EMBL: U46767; G1732123; "

DR EMBL: AC002482; G2340091; "

DR EMBL: X98306; E248571; "

DR MIM: 601391; "

DR PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.

DR PFAM: PF00048; il8; 1.

DR HSP: P13500; 1DOL.

KW CYTOKINE; CHEMOTAXIS; SIGNAL; GLYCOPROTEIN; INFLAMMATORY RESPONSE.

FT SIGNAL 1 23

FT CHAIN 24 98 MONOCYTE CHEMOTACTIC PROTEIN 4.

FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID.

FT DISULFID 34 58 BY SIMILARITY.

FT DISULFID 35 74 BY SIMILARITY.

FT CARBOHYD 29 29 POTENTIAL.

SQ SEQUENCE 98 AA; 10986 MW; DF52F6EC CRC32;

Query Match 87.0%; Score 87; DB 1; Length 98;

Best local similarity 83.3%; Pred. No. 1.34e-06;

Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 72 EICADPKKKWQ 83

|||||||:

Qy 1 EICADPKRWVR 12

RESULT 4

ID MCP1_HUMAN STANDARD; PRT; 99 AA.

AC P13500;

DT 01-JAN-1990 (REL. 13, CREATED)

DT 01-JAN-1990 (REL. 13, LAST SEQUENCE UPDATE)

DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)

DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1) (MONOCYTE CHEMOTACTIC

AND ACTIVATING FACTOR) (MCAF) (MONOCYTE SECRETORY PROTEIN JE)

DE (MONOCYTE CHEMOATTRACTANT PROTEIN 1) (HC11) (SMALL INDUCIBLE CYTOKINE

DE A2).

GN SCY2 OR MCP1.

OS HOMO SAPIENS (HUMAN).

OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;

OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.

RN [1]

RP SEQUENCE FROM N.A.

RX MEDLINE: 89165862.

RA FURUTANI Y., NOMURA H., NOTAKE M., OYAMADA Y., FUKUI T., YAMADA M.,

LARSEN C.G., OPPENHEIM J.J., MATSUSHIMA K.;

"Cloning and sequencing of the cDNA for human monocyte chemotactic

and activating factor (MCAF).";

RL BIOCHEM. BIOPHYS. RES. COMMUN. 159:249-255(1989).

RN [2]

RP SEQUENCE FROM N.A.

RX MEDLINE: 90097880.

RA ROLLINS B.J., STIER P., ERNST T., WONG G.G.;

"The human homolog of the JE gene encodes a monocyte secretory

protein.";

RL MOL. CELL. BIOL. 9:4687-4695(1989).

RN [3]

RP SEQUENCE FROM N.A.

RX MEDLINE: 89153605.

RA YOSHIMURA T., YUHKI N., MOORE S.K., APPELLA E., LERMAN M.I.,

LEONARD E.J.;

"Human monocyte chemoattractant protein-1 (MCP-1). Full-length cDNA

cloning, expression in mitogen-stimulated blood mononuclear

leukocytes, and sequence similarity to mouse competence gene JE.";

RL FEBS LETT. 244:487-493(1989).

RN [4]

RP SEQUENCE FROM N.A.

RX MEDLINE: 90290466.

RA SHY V.J., LI Y.S., KOLATTUKUDY P.E.;

"Structure of human monocyte chemotactic protein gene and its

regulation by TPA.";

RL BIOCHEM. BIOPHYS. RES. COMMUN. 169:346-351(1990).

RN [5]

RP SEQUENCE FROM N.A.

RX MEDLINE: 91207938.

RA CHANG H.C., HSU F., FREEMAN G.J., GRIFFIN J.D., REINHERZ E.L.;

"Cloning and expression of a gamma-interferon-inducible gene in

monocytes: a new member of a cytokine gene family.";

RL INT. IMMUNOL. 1:388-399(1989).

RN [6]

RP SEQUENCE FROM N.A.

RX MEDLINE: 94150478.

RA LI Y.S., SHY V.J., WRIGHT J.G., VALENTE A.J., CORNHILL J.F.,

KOLATTUKUDY P.E.;

"The expression of monocyte chemotactic protein (MCP-1) in human

RT

RT vascular endothelium in vitro and in vivo.";
 RL MOL. CELL. BIOCHEM. 126:61-68(1993).
 RN [7]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 92095166.
 RA YOSHIMURA T., LEONARD E.J.;
 RT "Human monocyte chemoattractant protein-1 (MCP-1).";
 RL ADV. EXP. MED. BIOL. 305:47-56(1991).
 RN [8]
 RP SEQUENCE OF 24-99.
 RX MEDLINE: 89184525.
 RA ROBINSON E.A., YOSHIMURA T., LEONARD E.J., TANAKA S., GRIFFIN P.R.,
 RT SHABANOWITZ J., HUNT D.F., APPELLA E.;
 RL "Complete amino acid sequence of a human monocyte chemoattractant, a
 putative mediator of cellular immune reactions.";
 RL PROC. NATL. ACAD. SCI. U.S.A. 86:1850-1854(1989).
 RN [9]
 RP SEQUENCE OF 29-53 AND 82-92.
 RX MEDLINE: 90211336.
 RA DECOCK B., CONINGS R., LENAERTS J.-P., BILLAU A., VAN DAMME J.;
 RT "Identification of the monocyte chemotactic protein from human
 osteosarcoma cells and monocytes: detection of a novel N-terminally
 processed form.";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 167:904-909(1990).
 RN [10]
 RP 3D-STRUCTURE MODELLING.
 RX MEDLINE: 91312872.
 RA GRONENBORN A.M., CLORE G.M.;
 RT "Modelling the three-dimensional structure of the monocyte chemo-
 attractant and activating protein MCP-1 on the basis of the
 solution structure of interleukin-8.";
 RL PROTEIN ENG. 4:263-269(1991).
 RN [11]
 RP X-RAY CRYSTALLOGRAPHY (1.85 ANGSTROMS).
 RX MEDLINE: 97143315.
 RA LUBKOWSKI J., BUJACZ G., DOMAILLE P.J., HANDEL T.M., WLODAWER A.;
 RT "The structure of MCP-1 in two crystal forms provides a rare example
 of variable quaternary interactions.";
 RL NAT. STRUCT. BIOL. 4:64-69(1997).
 RN [12]
 RP STRUCTURE BY NMR.
 RX MEDLINE: 96234959.
 RA HANDEL T.M., DOMAILLE P.J.;
 RT "Heteronuclear (1H, 13C, 15N) NMR assignments and solution structure
 of the monocyte chemoattractant protein-1 (MCP-1) dimer.";
 RL BIOCHEMISTRY 35:6569-6584(1996).
 RN [13]
 RP EFFECT OF DELETION OF N-TERMINAL RESIDUES.
 RX MEDLINE: 96195223.
 RA WEBER M., UGUCCIONI M., BAGGIOLINI M., CLARK-LEWIS I., DAHINDEN C.A.;
 RT "Deletion of the NH2-terminal residue converts monocyte chemotactic
 protein 1 from an activator of basophil mediator release to an
 eosinophil chemoattractant.";
 RL J. EXP. MED. 183:681-685(1996).
 RN [14]
 RP MUTAGENESIS.
 RX MEDLINE: 94253189.
 RA ZHANG Y.J., RUTLEDGE B.J., ROLLINS B.J.;
 RT "Structure/activity analysis of human monocyte chemoattractant
 protein-1 (MCP-1) by mutagenesis. Identification of a mutated protein
 that inhibits MCP-1-mediated monocyte chemotaxis.";
 RL J. BIOL. CHEM. 269:15918-15924(1994).
 RN [15]
 RP SUBUNIT.
 RX MEDLINE: 97053697.
 RA KIM K.-S., RAJARATHNAM K., CLARK-LEWIS I., SYKES B.D.;
 RT "Structural characterization of a monomeric chemokine: monocyte
 chemoattractant protein-3.";
 RL FEBS LETT. 395:277-282(1996).
 CC -1- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES AND BASOPHILS
 BUT NOT NEUTROPHILS OR EOSINOPHILS. AUGMENTS MONOCYTE ANTI-TUMOR
 ACTIVITY. HAS BEEN IMPLICATED IN THE PATHOGENESIS OF DISEASES
 CHARACTERIZED BY MONOCYTIC INFILTRATES, LIKE PSORIASIS, RHEUMATOID

CC ARTHRITIS OR ATHEROSCLEROSIS. MAY BE INVOLVED IN THE RECRUITMENT
 CC OF MONOCYTES INTO THE ARTERIAL WALL DURING THE DISEASE PROCESS OF
 CC ATHEROSCLEROSIS.
 CC -1- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM.
 CC -1- PTM: PROCESSING AT THE N-TERMINUS CAN REGULATE RECEPTOR AND TARGET
 CC CELL SELECTIVITY. DELETION OF THE AMINO- TERMINAL RESIDUE CONVERTS
 CC IT FROM AN ACTIVATOR OF BASOPHIL TO AN EOSINOPHIL CHEMOATTRACTANT.
 CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC
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DR EMBL: M31626; G386961;
 DR EMBL: M30816; G386961; JOINED.
 DR EMBL: M31625; G386961; JOINED.
 DR EMBL: M24545; G307163;
 DR EMBL: M28226; G338009;
 DR EMBL: X14768; G34514;
 DR EMBL: M37719; G487124;
 DR EMBL: M28225; G338007;
 DR EMBL: M28223; G338007; JOINED.
 DR EMBL: M28224; G338007; JOINED.
 DR EMBL: S69738; G545465;
 DR EMBL: S71513; G240868;
 DR EMBL: A17786; G641145;
 DR PIR: A35474; A35474.
 DR PIR: S03339; S03339.
 DR PDB: 1DOK; 12-MAR-97.
 DR PDB: 1DOL; 12-MAR-97.
 DR PDB: 1DOM; 14-OCT-96.
 DR PDB: 1DON; 14-OCT-96.
 DR PDB: 1MCA; 15-OCT-94.
 DR TIM: 158105;
 DR PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM: PF00048; 118; 1.
 KW CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE; 3D-STRUCTURE.
 FT SIGNAL 1 23
 FT CHAIN 1 23
 FT MOD_RES 24 99
 FT DISULFID 34 59
 FT DISULFID 35 75
 FT CARBOHYD 37 37
 FT VARIANT 76 76
 FT MUTAGEN 24 24
 FT MUTAGEN 25 32
 FT MUTAGEN 24 85
 FT MUTAGEN 24 91
 FT MUTAGEN 26 26
 FT MUTAGEN 29 29
 FT MUTAGEN 47 47
 FT MUTAGEN 50 50
 FT MUTAGEN 51 51
 FT MUTAGEN 53 53
 FT MUTAGEN 91 91
 SQ SEQUENCE 99 AA; 11025 MW; 5355B695 CRC32;
 MONOCYTE CHEMOTACTIC PROTEIN 1.
 PYRROLIDONE CARBOXYLIC ACID.
 POTENTIAL.
 A -> T.
 MISSING: LOSS OF ACTIVITY.
 MISSING: LOSS OF ACTIVITY.
 MISSING: 90% REDUCTION IN ACTIVITY.
 MISSING: 83% REDUCTION IN ACTIVITY.
 D->A: 90% REDUCTION IN ACTIVITY.
 N->A: 50% REDUCTION IN ACTIVITY.
 R->F: 95% REDUCTION IN ACTIVITY.
 S->Q: 40% REDUCTION IN ACTIVITY.
 Y->D: LOSS OF ACTIVITY.
 R->L: LOSS OF ACTIVITY.
 D->L: 90% REDUCTION IN ACTIVITY.

Query Match 84.0%; Score 84; DB 1; Length 99;
 Best Local Similarity 75.0%;
 Matches 9; Conservative 3; Mismatches 0; Indels 0; Gaps 0;
 Db 73 EICADPKQKWQ 84
 Qy 1 EICADPKRWVR 12
 RESULT 5 STANDARD; PRT; 101 AA.
 ID MCP1_CANFA

```

AC P52203;
DT 01-OCT-1996 (REL. 34, CREATED)
DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1) (MONOCYTE
DE CHEMOATTRACTANT PROTEIN-1).
GN SCYA2 OR MCP1.
OS CANIS FAMILIARIS (DOG).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC CARNIVORA; FISSIPEDIA; CANIDAE; CANIS.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=JUGULAR VEIN ENDOTHELIAL;
RX MEDLINE; 97176620.
RA KUMAR A.G., BALLANTYNE C.M., MICHAEL L.H., KUKIELKA G.L., YOUSER K.A.,
RA LINDSEY M.L., HAWKINS H.K., BIRDSALL H.H., MACKAY C.R., LAROSA G.J.,
RA ROSEN R.D., SMITH C.W., ENTMAN M.L.;
RT "Induction of monocyte chemoattractant protein-1 in the small veins
of the ischemic and reperfused canine myocardium.";
RL CIRCULATION 95:693-700(1997).
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
CC NEUTROPHILS. IMPORTANT FACTOR IN THE COURSE OF THE INFLAMMATORY
CC REACTION TO REPERFUSION OF THE PREVIOUSLY ISCHEMIC MYOCARDIUM.
CC MAY PLAY A SIGNIFICANT ROLE IN MONOCYTE TRAFFICKING INTO THE
CC REPERFUSED MYOCARDIUM.
CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
CC -!- INDUCTION: BY TNF-ALPHA.
CC -!- TISSUE SPECIFICITY: ENDOTHELIUM OF SMALL VEINS AND INTRAFASCICULAR
CC VEINS, AND INFILTRATING LEUKOCYTES.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC
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CC
CC EMBL; U29653; G1144186; .
CC DR EMBL; X79416; G872313; .
CC DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
CC DR PFAM; PF000048; i18; 1.
CC DR HSP; P13500; 1D0N;
CC KW CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE.
CC FT SIGNAL 1 23 BY SIMILARITY.
CC FT CHAIN 24 99 MONOCYTE CHEMOTACTIC PROTEIN 1.
CC FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
CC SIMILARITY).
CC FT DISULFID 34 59 BY SIMILARITY.
CC FT DISULFID 35 75 BY SIMILARITY.
CC FT SEQUENCE 101 AA; 1121 MW; A7075B14 CRC32;
CC SQ SEQUENCE 84.0%; Score 84; DB 1; Length 101;
CC Query Match 75.0%; Pred. No. 6.50e-06;
CC Best Local Similarity 9; Conservative 3; Mismatches 0; Indels 0; Gaps 0;
CC Matches
CC Db 73 EICADPKKWKVQ 84
CC QY 1 EICADPKRWVR 12
CC
CC RESULT 6 STANDARD; PRT; 99 AA.
CC ID MCP1_PIG
CC AC P42831;
CC DT 01-NOV-1995 (REL. 32, CREATED)
CC DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
CC DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
CC DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1).
CC GN SCYA2.
CC OS SUS SCROFA (PIG).
CC OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
CC ARTIODACTYLA; SUIFORMES; SUINA; SUIDAE; SUS.
CC
CC RESULT 7 STANDARD; PRT; 99 AA.
CC ID MCP2_BOVIN
CC AC Q09141;
CC DT 01-NOV-1995 (REL. 32, CREATED)
CC DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
CC DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
CC DE MONOCYTE CHEMOTACTIC PROTEIN 2 PRECURSOR (MCP-2) (MONOCYTE
CC CHEMOATTRACTANT PROTEIN 2).
CC GN SCYA8 OR MCP2.
CC OS BOS TAURUS (BOVINE).
CC OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
CC OC ARTIODACTYLA; RUMINANTIA; PECORA; BOVIOIDEA; BOVINDAE; BOS.
CC RN [1]
CC RP SEQUENCE FROM N.A.
CC RX MEDLINE; 94114084.
CC RA WEMPE F., HANES J., SCHEIT K.H.;
CC RT "Cloning of the gene for bovine monocyte chemoattractant protein-2.";
CC RL DNA CELL BIOL. 13:1-8(1994).
CC CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES. THIS PROTEIN
CC CAN BIND HEPARIN.
CC CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
CC CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC
CC [1]
CC RP SEQUENCE FROM N.A.
CC RX MEDLINE; 94183284.
CC RA HOSANG K., KNOKE I., KLAUDINY J., WEMPE F., WUTTKE W., SCHEIT K.H.;
CC RT "Porcine luteal cells express monocyte chemoattractant protein-1
CC (MCP-1): analysis by polymerase chain reaction and cDNA cloning.";
CC RL BIOCHEM. BIOPHYS. RES. COMMUN. 199:962-968(1994).
CC RN [2]
CC RP SEQUENCE FROM N.A.
CC RC TISSUE=BRAIN;
CC ZACH O.R.F.;
CC RL SUBMITTED (JUL-1994) TO EMBL/GENBANK/DBJ DATA BANKS.
CC CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
CC NEUTROPHILS.
CC CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
CC CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC
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CC
CC EMBL; Z48479; G683717; .
CC DR EMBL; X79416; G872313; .
CC DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
CC DR PFAM; PF000048; i18; 1.
CC DR HSP; P13500; 1D0N;
CC KW CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE.
CC FT SIGNAL 1 23 BY SIMILARITY.
CC FT CHAIN 24 99 MONOCYTE CHEMOTACTIC PROTEIN 1.
CC FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
CC SIMILARITY).
CC FT DISULFID 34 59 BY SIMILARITY.
CC FT DISULFID 35 75 BY SIMILARITY.
CC FT SEQUENCE 99 AA; 10976 MW; ECC3AFB4 CRC32;
CC SQ SEQUENCE 83.0%; Score 83; DB 1; Length 99;
CC Query Match 66.7%; Pred. No. 1.10e-05;
CC Best Local Similarity 8; Conservative 4; Mismatches 0; Indels 0; Gaps 0;
CC Matches
CC Db 73 EICADPKKWKVQ 84
CC QY 1 EICADPKRWVR 12
CC
CC RESULT 7 STANDARD; PRT; 99 AA.
CC ID MCP2_BOVIN
CC AC Q09141;
CC DT 01-NOV-1995 (REL. 32, CREATED)
CC DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
CC DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
CC DE MONOCYTE CHEMOTACTIC PROTEIN 2 PRECURSOR (MCP-2) (MONOCYTE
CC CHEMOATTRACTANT PROTEIN 2).
CC GN SCYA8 OR MCP2.
CC OS BOS TAURUS (BOVINE).
CC OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
CC OC ARTIODACTYLA; RUMINANTIA; PECORA; BOVIOIDEA; BOVINDAE; BOS.
CC RN [1]
CC RP SEQUENCE FROM N.A.
CC RX MEDLINE; 94114084.
CC RA WEMPE F., HANES J., SCHEIT K.H.;
CC RT "Cloning of the gene for bovine monocyte chemoattractant protein-2.";
CC RL DNA CELL BIOL. 13:1-8(1994).
CC CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES. THIS PROTEIN
CC CAN BIND HEPARIN.
CC CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
CC CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).

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DR EMBL; S67954; E18856; -
DR EMBL; S67956; G544997; -
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; i18; 1.
DR HSSP; P80098; INCV.
KW CYTOKINE; CHEMOTAXIS; SIGNAL; HEPARIN-BINDING; INFLAMMATORY RESPONSE.
FT SIGNAL 1 23 BY SIMILARITY.
FT CHAIN 24 99 MONOCYTE CHEMOTACTIC PROTEIN 2.
FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
FT SIMILARITY).
FT DISULFID 34 59 BY SIMILARITY.
FT DISULFID 35 75 BY SIMILARITY.
FT DISULFID 36 76 BY SIMILARITY.
SQ SEQUENCE 99 AA; 10300 MW; 9BA2CD26 CRC32;

Query Match 81.0%; Score 81; DB 1; Length 99;

Best Local Similarity 58.3%; Pred. No. 3.08e-05;

Matches 7; Conservative 5; Mismatches 0; Indels 0; Gaps 0;

Db 73 DVCADPKKKVQ 84

QY 1 EICADPRWVR 12

RESULT 8

ID EOTA_MOUSE STANDARD; PRT; 97 AA.
AC P48298;
DT 01-FEB-1996 (REL. 33, CREATED)
DT 01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE EOTAXIN PRECURSOR (EOSINOPHIL CHEMOTACTIC PROTEIN).
OS SCYLL.
GN MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=LUNG;
RX MEDLINE; 96004658.
RA ROTHENBERG M.E., LUSTER A.D., LEDER P.;
RT "Murine eotaxin: an eosinophil chemoattractant inducible in
RT endothelial cells and in interleukin 4-induced tumor suppression."
RL PROC. NATL. ACAD. SCI. U.S.A. 92:8960-8964(1995).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6J; TISSUE=LUNG;
RX MEDLINE; 96158746.
RA GONZALO J.-A., JTA G.-O., AGUIRRE V., FRIEND D., COYLE A.J.,
RA JENKINS N.A., LIN G.-S., KATZ H., LICHTMAN A., COPELAND N.G., KOPF M.,
RA GUTIERREZ-RAMOS J.-C.;
RT "Mouse eotaxin expression parallels eosinophil accumulation during
RT lung allergic inflammation but it is not restricted to a Th2-type
RT response."
RL IMMUNITY 4:1-14(1996).

CC -!- FUNCTION: IN RESPONSE TO THE PRESENCE OF ALLERGENS, THIS PROTEIN
CC DIRECTLY PROMOTES THE ACCUMULATION OF EOSINOPHILS (A PROMINENT
CC FEATURE OF ALLERGIC INFLAMMATORY REACTIONS), BUT NOT
CC LYMPHOCYTES, MACROPHAGES OR NEUTROPHILS.
CC -!- SUBCELLULAR LOCATION: EXTRACELLULAR.
CC -!- TISSUE SPECIFICITY: EXPRESSED CONSTITUTIVELY IN THE THYMUS.
CC EXPRESSION INDUCIBLE IN THE LUNG (TYPE I ALVEOLAR EPITHELIAL
CC CELLS), INTESTINE, HEART, SPLEEN, KIDNEY.
CC -!- INDUCTION: BY INTERFERON-GAMMA AND LIPOPOLYSACCHARIDE (LPS).
CC -!- PTM: O-GLYCOSYLATED (PROBABLE).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).

CC

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DR EMBL; U26426; G995911; -
DR EMBL; U40672; G113937; -
DR MGD; MGI:103576; SCYLL.
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; i18; 1.
DR HSSP; P80098; INCV.
KW EOSINOPHIL; CYTOKINE; CHEMOTAXIS; GLYCOPROTEIN; SIGNAL;
KW INFLAMMATORY RESPONSE.
FT SIGNAL 1 23 POTENTIAL.
FT CHAIN 24 97 EOTAXIN.
FT DISULFID 32 57 BY SIMILARITY.
FT DISULFID 33 73 BY SIMILARITY.
SQ SEQUENCE 97 AA; 10893 MW; F85A96BC CRC32;

Query Match 80.0%; Score 80; DB 1; Length 97;

Best Local Similarity 75.0%; Pred. No. 5.16e-05;

Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 71 EICADPKKKVQ 82

QY 1 EICADPRWVR 12

RESULT 9

ID EOTA_RAT STANDARD; PRT; 97 AA.
AC P97545; 008780;
DT 15-JUL-1998 (REL. 36, CREATED)
DT 15-JUL-1998 (REL. 36, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE EOTAXIN PRECURSOR (EOSINOPHIL CHEMOTACTIC PROTEIN).
OS RATTUS NORVEGICUS (RAT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
RN [1]
RP SEQUENCE FROM N.A.
RA WILLIAMS C.M., NEWTON D.J., WILSON S.A., COLEMAN J.C.,
RA FLANAGAN B.F.;
RL SUBMITTED (DEC-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=LUNG;
RX ISHII Y.;
RL SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -!- FUNCTION: IN RESPONSE TO THE PRESENCE OF ALLERGENS, THIS PROTEIN
CC DIRECTLY PROMOTES THE ACCUMULATION OF EOSINOPHILS, A PROMINENT
CC FEATURE OF ALLERGIC INFLAMMATORY REACTIONS (BY SIMILARITY).
CC -!- SUBCELLULAR LOCATION: EXTRACELLULAR.
CC -!- PTM: O-GLYCOSYLATED (PROBABLE).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).

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DR EMBL; Y08358; E274141; -
DR EMBL; U96637; G2098785; -
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; i18; 1.
DR HSSP; P80098; INCV.

Sat Feb 5 12:04:47 2000

genomic organization, complete sequence, and chromosomal location of the gene for human eotaxin (SCY11), an eosinophil-specific CC chemokine.;
 GENOMICS 41:471-476(1997).

[6]

SEQUENCE FROM N.A.

TISSUE-LUNG;

RX MEDLINE; 97445071.

RA HEIN H., SCHLUETER C., KULKE R., CHRISTOPHERS E., SCHROEDER J.M.,

RA BARTELS J.;

RA "Genomic organization, sequence, and transcriptional regulation of the human eotaxin gene.*";

RT BIOCHEM. BIOPHYS. RES. COMMUN. 237:537-542(1997).

RL [7]

STRUCTURE BY NMR.

RP MEDLINE; 98380469.

RX CRUMP M.P., RAJARATHNAM K., KIM K.S., CLARK-LEWIS I., SYKES B.D.;

RA "Solution structure of eotaxin, a chemokine that selectively recruits eosinophils in allergic inflammation.*";

RT BIOCHEMISTRY 37:11670-11678(1998).

RL

CC FUNCTION: IN RESPONSE TO THE PRESENCE OF ALLERGENS, THIS PROTEIN DIRECTLY PROMOTES THE ACCUMULATION OF EOSINOPHILS, A PROMINENT FEATURE OF ALLERGIC INFLAMMATORY REACTIONS.

CC SUBCELLULAR LOCATION: EXTRACELLULAR.

CC PTM: O-GLYCOSYLATED (PROBABLE).

CC INDUCTION: BY TNF-ALPHA, IL-1-ALPHA AND INTERFERON GAMMA.

CC SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE C-C) (CHEMOKINE CC).

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EMBL; U46573; G1280141; -

EMBL; U34780; G1185440; -

EMBL; D49372; G1552241; -

EMBL; Z69291; E221070; -

EMBL; Z75668; E251275; -

EMBL; Z75669; E251258; -

EMBL; U46572; G2088509; -

EMBL; Z92709; E329504; -

EMBL; 601156; -

PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.

PFAM; PF00048; i18; 1.

PDB; 2EOT; 11-NOV-98.

EOSINOPHIL; CYTOKINE; CHEMOTAXIS; GLYCOPROTEIN; SIGNAL;

INFLAMMATORY RESPONSE; POLYMORPHISM; 3D-STRUCTURE.

FT SIGNAL 1 23

FT CHAIN 24 97

FT DISULFID 32 57

FT DISULFID 33 73

FT VARIANT 7 7

FT VARIANT 23 23

FT VARIANT 51 51

FT VARIANT 79 79

FT SEQUENCE 97 AA; 10732 MW; 6C0F3D98 CRC32;

Query Match 79.0%; Score 79; DB 1; Length 97;

Best Local Similarity 66.7%; Pred. No. 8.60e-05;

Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 71 DICADPKKKWQV 82

QY 1 EICADPKRWVR 12

RESULT 11

ID MCPA_BOVIN STANDARD; PRT; 99 AA.

AC P28291;

KW EOSINOPHIL; CYTOKINE; CHEMOTAXIS; GLYCOPROTEIN; SIGNAL;

KW INFLAMMATORY RESPONSE.

FT SIGNAL 1 23

FT CHAIN 24 97

FT DISULFID 32 57

FT DISULFID 33 73

FT CARBOHYD 94 94

FT CONFLICT 3 3

FT SEQUENCE 97 AA; 10851 MW; 05B4ED45 CRC32;

Query Match 80.0%; Score 80; DB 1; Length 97;

Best Local Similarity 75.0%; Pred. No. 5.16e-05;

Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 71 EICADPKKKWQV 82

QY 1 EICADPKRWVR 12

RESULT 10

ID EOTA_HUMAN STANDARD; PRT; 97 AA.

AC P51671; P50877; Q92490; Q92491;

DT 01-OCT-1996 (REL. 34, CREATED)

DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)

DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)

DE EOTAXIN PRECURSOR (EOSINOPHIL CHEMOTACTIC PROTEIN).

GN SCY11.

OS HOMO SAPIENS (HUMAN).

OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;

OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.

CC [1]

RP SEQUENCE FROM N.A.

RX MEDLINE; 96181758.

RA GARCIA-ZEPEDA E.A., ROTHENBERG M.E., OWNBEY T.R., LEDER P.,

RA LUSTER A.D.;

RA "Human eotaxin is a specific chemoattractant for eosinophil cells and provides a new mechanism to explain tissue eosinophilia.*";

RT NAT. MED. 2:449-456(1996).

RN [2]

RP SEQUENCE FROM N.A.

RX MEDLINE; 96189937.

RA PONATH P.D., QIN S., RINGLER D.J., CLARK-LEWIS I., WANG J., KASSAM N.,

RA SMITH H., SHI X., GONZALO J.A., NEWMAN W., GUTIERREZ-RAMOS J.C.,

RA MACKAY C.R.;

RA "Cloning of the human eosinophil chemoattractant, eotaxin. Expression, receptor binding, and functional properties suggest a mechanism for the selective recruitment of eosinophils.*";

RT J. CLIN. INVEST. 97:604-612(1996).

RL [3]

RP SEQUENCE FROM N.A.

RC TISSUE-SMALL INTESTINE;

RC MEDLINE; 96205964.

RX KITAHARA M., NAKAJIMA T., IMAI T., HARADA S., COMBADIÈRE C.,

RA TIFANY H.L., MURPHY P.M., YOSHIE O.;

RA "Molecular cloning of human eotaxin, an eosinophil-selective CC chemokine, and identification of a specific eosinophil eotaxin receptor, CC chemokine receptor 3.*";

RT J. BIOL. CHEM. 271:7725-7730(1996).

RL [4]

RP SEQUENCE FROM N.A., SEQUENCE OF 60-65 AND 75-88, AND VARIANTS.

RP TISSUE=FORESKIN;

RC MEDLINE; 96374440.

RX BARTELS J., SCHLUETER C., RICHTER E., NOSO N., KULKE R.,

RA CHRISTOPHERS E., SCHROEDER J.M.;

RA "Human dermal fibroblasts express eotaxin: molecular cloning, mRNA expression, and identification of eotaxin sequence variants.*";

RT BIOCHEM. BIOPHYS. RES. COMMUN. 225:1045-1051(1996).

RL [5]

RP SEQUENCE FROM N.A.

RC TISSUE=PLACENTA.

RX MEDLINE; 97312708.

RA GARCIA-ZEPEDA E.A., ROTHENBERG M.E., WEREMOWICZ S., SARAFI M.N.,

RA MORTON C.C., LUSTER A.D.;

DT 01-DEC-1992 (REL. 24, CREATED)
 DT 01-DEC-1992 (REL. 24, LAST SEQUENCE UPDATE)
 DT 01-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)
 DE MONOCYTE CHEMOTACTIC PROTEIN 1A PRECURSOR (MCP-1A) (MCP-1) (ACIDIC
 DE SEMINAL FLUID PROTEIN).
 OS BOS TAURUS (BOVINE)
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC ARTIODACTYLA; RUMINANTIA; PECORA; BOVIDAE; BOVINAE; BOS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE-SEMINAL PLASMA;
 RX MEDLINE; 92096117.
 RA WEMPE F., HENSCHEN A., SCHEIT K.H.;
 RT "Gene expression and cDNA cloning identified a major basic protein
 RT constituent of bovine seminal plasma as bovine
 RT monocyte-chemoattractant protein-1 (MCP-1).";
 RL DNA CELL BIOL. 10:671-679(1991).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC TISSUE-SEMINAL PLASMA;
 RX MEDLINE; 92181448.
 RA WEMPE F., EINSPIANER R., SCHEIT K.H.;
 RT "Characterization by cDNA cloning of the mRNA of a new growth factor
 RT from bovine seminal plasma: acidic seminal fluid protein.";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 183:232-237(1992).
 RN [3]
 RP SEQUENCE FROM N.A.
 RC MEDLINE; 94338337.
 RA WEMPE F., KUHLMANN J.K., SCHEIT K.H.;
 RT "Characterization of the bovine monocyte chemoattractant protein-1
 RT gene.";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 202:1272-1279(1994).
 CC -1- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
 CC NEUTROPHILS.
 CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC -----
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 CC or send an email to license@isb-sib.ch).
 CC -----
 DR EMBL; L32659; G624394; -;
 DR EMBL; M84602; G163385; -;
 DR PIR; A39296; A39296.
 DR JC2336; JC2336.
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSP; P13500; 1DON.
 KW CYTOKINE; CHEMOTAXIS; SIGNAL.
 FT SIGNAL 1 23 BY SIMILARITY.
 FT CHAIN 24 99 MONOCYTE CHEMOTACTIC PROTEIN 1A.
 FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
 FT SIMILARITY).
 FT DISULFID 34 59 BY SIMILARITY.
 FT DISULFID 35 75 BY SIMILARITY.
 SQ SEQUENCE 99 AA; 11114 MW; C8F5821D CRC32;
 Query Match 79.0%; Score 79; DB 1; Length 99;
 Best Local Similarity 66.7%; Pred. No. 8.60e-05;
 Matches 8; Conservative 4; Mismatches 0; Indels 0; Gaps 0;
 Db 73 ELCADPKOKVQ 84
 QY 1 EICADPKRWR 12
 RESULT 12
 ID M11A_RAT
 AC P50229; STANDARD; PRT; 92 AA.

DT 01-OCT-1996 (REL. 34, CREATED)
 DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
 DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
 DE MACROPHAGE INFLAMMATORY PROTEIN 1-ALPHA PRECURSOR (MIP-1-ALPHA).
 GN SCYA3 OR MIP1A.
 OS RATTUS NORVEGICUS (RAT).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN-CD-1; TISSUE=LUNG;
 RX MEDLINE; 95298037.
 RA SHI M.M., GODLESKI J.J., PAULASKIS J.D.;
 RT "Molecular cloning and posttranscriptional regulation of macrophage
 RT inflammatory protein-1 alpha in alveolar macrophages.";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 211:289-295(1995).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC STRAIN-LONG EVANS; TISSUE=LUNG;
 RX MEDLINE; 95238980.
 RA SHANLEY T.P., SCHMAL H., FRIEDL H.P., JONES M.L., WARD P.A.;
 RT "Role of macrophage inflammatory protein-1 alpha (MIP-1 alpha) in
 RT acute lung injury in rats.";
 RL J. IMMUNOL. 154:4793-4802(1995).
 RN [3]
 RP SEQUENCE OF 24-57.
 RC STRAIN-WISTAR;
 RX MEDLINE; 96183056.
 RA NAKAGAWA H., SHIOTA S., TAKANO K., SHIBATA F., KATO H.;
 RT "Cytokine-induced neutrophil chemoattractant (CINC)-2 alpha, a novel
 RT member of rat GRO/CINC, is a predominant chemokine produced by
 RT lipopolysaccharide-stimulated rat macrophages in culture.";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 220:945-948(1996).
 CC -1- FUNCTION: MONOKINE WITH INFLAMMATORY AND CHEMOKINETIC PROPERTIES.
 CC HAS CHEMOTACTIC ACTIVITY FOR MONOCYTES, NEUTROPHILS, EOSINOPHILS,
 CC BASOPHILS, AND LYMPHOCYTES. REQUIRED FOR LUNG TNF-ALPHA
 CC PRODUCTION, NEUTROPHIL RECRUITMENT AND SUBSEQUENT LUNG INJURY AND
 CC MAY FUNCTION AS AN AUTOCRINE MEDIATOR FOR THE MACROPHAGE
 CC PRODUCTION OF TNF-ALPHA WHICH IN TURN UP-REGULATES VASCULAR
 CC ADHESION MOLECULES REQUIRED FOR NEUTROPHIL INFILUX. THIS PROTEIN
 CC BINDS HEPARIN.
 CC -1- INDUCTION: BY LIPOPOLYSACCHARIDE (LPS).
 CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC -----
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 CC -----
 DR EMBL; U22414; G790633; -;
 DR EMBL; U06435; G459150; -;
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSP; P13236; 1HUN.
 KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL; HEPARIN-BINDING.
 FT SIGNAL 1 23
 FT CHAIN 24 92 MACROPHAGE INFLAMMATORY PROTEIN 1-ALPHA.
 FT DISULFID 34 57 BY SIMILARITY.
 FT DISULFID 35 73 BY SIMILARITY.
 FT CONFLICT 6 6 A -> T (IN REF. 2).
 FT CONFLICT 57 57 C -> W (IN REF. 2 AND 3).
 SQ SEQUENCE 92 AA; 10335 MW; F48CF89F CRC32;
 Query Match 78.0%; Score 78; DB 1; Length 92;
 Best Local Similarity 75.0%; Pred. No. 1.43e-04;
 Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
 Db 71 QICADPKRWTQ 82
 :||||||| |

Sat Feb 5 12:04:47 2000

US-09-150-813-67.rsp

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QY      1 EICADPKRWVR 12
RESULT  13
ID      IL8_SHEEP      STANDARD;      PRT;      101 AA.
AC      P36925;
DT      01-JUN-1994 (REL. 29, CREATED)
DT      01-JUN-1994 (REL. 29, LAST SEQUENCE UPDATE)
DT      01-JUN-1995 (REL. 32, LAST ANNOTATION UPDATE)
DT      01-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)
DE      INTERLEUKIN-8 PRECURSOR (IL-8).
GN      IL8.
OS      OVIS ARIES (SHEEP).
OC      EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC      ARTIODACTYLA; RUMINANTIA; PECORA; BOVOIDEA; BOVIDAE; CAPRINAE; OVIS.
RN      [1]
RP      SEQUENCE FROM N.A.
RX      MEDLINE: 95121931.
RA      LEGASTELOS I., GREENLAND T., ARNAUD P., MORNEX J.F., CORDIER G.;
RT      "Sequencing of the ovine interleukin-8-encoding cDNA using the
RT      polymerase chain reaction.";
RL      GENE 150:367-369(1994).
RN      [2]
RP      SEQUENCE FROM N.A.
RX      MEDLINE: 95137691.
RA      SEOW H.F., YOSHIMURA T., WOOD P.R., COLDITZ I.G.;
RT      "Cloning, sequencing, expression and inflammatory activity in skin of
RT      ovine interleukin-8.";
RL      IMMUNOL. CELL BIOL. 72:398-405(1994).
CC      -!- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,
CC      BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
CC      NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
CC      RESPONSE TO AN INFLAMMATORY STIMULUS.
CC      -!- SUBUNIT: HOMODIMER.
CC      -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC      C-X-C) (CHEMOKINE CXCL).
CC      -----
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CC      or send an email to license@isb-sib.ch).
CC      -----
CC      EMBL: X78306; G463254; -.
CC      EMBL: S74436; G786591; -.
CC      PIR: S42496; S42496.
CC      PROSITE: PS00471; SMALL_CYTOKINES_CXC; 1.
CC      PFAM: PF00048; IL8; 1.
CC      HSP: P10145; 1IKL.
CC      CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
CC      SIGNAL 1 22 BY SIMILARITY.
CC      CHAIN 23 101 INTERLEUKIN-8.
CC      DISULFID 34 61 BY SIMILARITY.
CC      DISULFID 36 77 BY SIMILARITY.
CC      SEQUENCE 101 AA; 11292 MW; 5A574527 CRC32;
CC      -----
Query Match 78.0%; Score 78; DB 1; Length 101;
Best Local Similarity 66.7%; Pred. No. 1.43e-04;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 75 EICADPKRWVQ 86
QY      1 EICADPKRWVR 12
RESULT  14
ID      IL8_CANFA      STANDARD;      PRT;      101 AA.
AC      P41324;
DT      01-FEB-1995 (REL. 31, CREATED)
DT      01-FEB-1995 (REL. 31, LAST SEQUENCE UPDATE)
DT      01-FEB-1998 (REL. 37, LAST ANNOTATION UPDATE)
DE      INTERLEUKIN-8 PRECURSOR (IL-8).
GN      IL8.
OS      CANIS FAMILIARIS (DOG).
OS      EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC      CARNIVORA; FISSIPEDIA; CANIDAE; CANIS.
RN      [1]
RP      SEQUENCE FROM N.A.
RX      MEDLINE: 94010328.
RA      ISHIKAWA J., SUZUKI S., HOTTA K., HIROTA Y., MIZUNO S., SUZUKI K.;
RT      "Cloning of a canine gene homologous to the human
RT      interleukin-8-encoding gene.";
RL      GENE 131:305-306(1993).
RN      [2]
RP      SEQUENCE FROM N.A.
RX      MEDLINE: 95127913.
RA      MATSUMOTO Y., MOHAMED A., ONODERA T., KATO H., OHASHI T.,
RA      GOITSUKA R., TSUJIMOTO H., HASEGAWA A., FURUSAWA S., YOSHIHARA K.,
RA      ISHIKAWA J., HOTTA K., SUZUKI K., HIROTA Y.;
RT      "Molecular cloning and expression of canine interleukin 8 cDNA.";
RL      CYTOKINE 6:455-461(1994).
RN      [3]
RP      SEQUENCE FROM N.A.
RX      STRAIN=MONGREL; TISSUE=JUGULAR VEIN;
RC      MEDLINE: 95114148.
RA      KUKIELKA G.L., SMITH W.C., LAROSA G.J., MANNING A.M.,
RA      MENDOZA L.H., DALY T.J., HUGHES B.J., YOUNG K.A., HAWKINS H.K.,
RA      MICHAEL L.H., ROT A., ENTMAN M.L.;
RT      "Interleukin-8 gene induction in the myocardium after ischemia and
RT      reperfusion in vivo.";
RL      J. CLIN. INVEST. 95:89-103(1994).
RN      [4]
RP      SEQUENCE FROM N.A.
RX      STRAIN=BEAGLE;
RC      MEDLINE: 97230298.
RA      STRAUBINGER R.K., STRAUBINGER A.F., HARTER L., JACOBSON R.H.,
RA      CHANG Y.F., SUMMERS B.A., ERB H.N., APPEL M.J.;
RT      "Borrelia burgdorferi migrates into joint capsules and causes an up-
RT      regulation of interleukin-8 in synovial membranes of dogs
RT      experimentally infected with ticks.";
RL      INFECT. IMMUN. 65:1273-1285(1997).
CC      -!- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,
CC      BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
CC      NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
CC      RESPONSE TO AN INFLAMMATORY STIMULUS.
CC      -!- SUBUNIT: HOMODIMER.
CC      -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC      C-X-C) (CHEMOKINE CXCL).
CC      -----
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CC      -----
CC      EMBL: D28772; G517100; -.
CC      EMBL: D14285; G475152; -.
CC      EMBL: U10308; G607814; -.
CC      EMBL: AF048717; G2935472; -.
CC      PROSITE: PS00471; SMALL_CYTOKINES_CXC; 1.
CC      PFAM: PF00048; IL8; 1.
CC      HSP: P10145; 1IKL.
CC      CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
CC      SIGNAL 1 22 BY SIMILARITY.
CC      CHAIN 23 101 INTERLEUKIN-8.
CC      DISULFID 34 61 BY SIMILARITY.
CC      DISULFID 36 77 BY SIMILARITY.
CC      SEQUENCE 101 AA; 11280 MW; 7C49D62D CRC32;
CC      -----
Query Match 78.0%; Score 78; DB 1; Length 101;
Best Local Similarity 66.7%; Pred. No. 1.43e-04;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

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Db 75 EVCLDPKWKWQ 86
 QY 1 EICADPKRWVR 12

RESULT 15
 ID IL8_PIG STANDARD; PRT; 103 AA.
 AC P26894; P22951;
 DT 01-AUG-1991 (REL. 19, CREATED)
 DT 01-AUG-1992 (REL. 23, LAST SEQUENCE UPDATE)
 DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
 DE INTERLEUKIN-8 PRECURSOR (IL-8) (ALVEOLAR MACROPHAGE CHEMOTACTIC FACTOR
 DE I) (AMCF-I).
 GN IL8.
 OS SUS SCROFA (PIG).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC ARTIODACTYLA; SUIFORMES; SUINA; SUIDAE; SUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 94103307.
 RA LIN G., PEARSON A.E., SCAMURRA R.W., ZHOU Y., BAARSCH M.J.,
 RA WEISS D.J., MURTAUGH M.P.;
 RT "Regulation of interleukin-8 expression in porcine alveolar
 RT macrophages by bacterial lipopolysaccharide.";
 RL J. BIOL. CHEM. 269:77-85(1994).
 RN [2]
 RP SEQUENCE FROM N.A.
 RA SANJANWALA M.;
 RL SUBMITTED (JUL-1991) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [3]
 RP SEQUENCE FROM N.A., AND SEQUENCE OF 26-45.
 RX TISSUE-LUNG;
 RX MEDLINE; 93041741.
 RA GOODMAN R.B., FOSTER D.C., MATHEWES S.L., OSBORN S.G., KUIJPER J.L.,
 RA FORSTROM J.W., MARTIN T.R.;
 RT "Molecular cloning of porcine alveolar macrophage-derived neutrophil
 RT chemotactic factors I and II; identification of porcine IL-8 and
 RT another interleukin-alpha protein.";
 RL BIOCHEMISTRY 31:10483-10490(1992).
 RN [4]
 RP REVISION TO 23.
 RA GOODMAN R.B.;
 RL SUBMITTED (MAR-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [5]
 RP SEQUENCE OF 26-45.
 RX STRAIN-YORKSHIRE;
 RX MEDLINE; 91217086.
 RA GOODMAN R.B., FORSTROM J.W., OSBORN S.G., CHI E.Y., MARTIN T.R.;
 RT "Identification of two neutrophil chemotactic peptides produced by
 RT porcine alveolar macrophages.";
 RL J. BIOL. CHEM. 266:8455-8463(1991).
 CC -!- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,
 CC BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
 CC NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
 CC RESPONSE TO AN INFLAMMATORY STIMULUS.
 CC -!- SUBUNIT: HOMODIMER.
 CC -!- TISSUE SPECIFICITY: ALVEOLAR MACROPHAGES.
 CC -!- INDUCTION: BY LIPOPOLYSACCHARIDE.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).
 CC -----
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 CC -----
 CC EMBL; M86923; G164521; -
 CC EMBL; X61151; G516197; -
 CC EMBL; M99367; G1235612; -

DR PIR; A44253; A44253.
 DR PIR; A39819; A39819.
 DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSP; P10145; i18; 1.
 KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 FT SIGNAL 1 25
 FT CHAIN 26 103 INTERLEUKIN-8.
 FT DISULFID 34 61 BY SIMILARITY.
 FT DISULFID 36 77 BY SIMILARITY.
 FT CONFLICT 33 34 RC -> CR (IN REF. 5).
 FT CONFLICT 87 87 K -> KK (IN REF. 2).
 SQ SEQUENCE 103 AA; 11633 MW; A012D59D CRC32;

Query Match 78.0%; Score 78; DB 1; Length 103;
 Best Local Similarity 66.7%; Pred. No. 1.43e-04;
 Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 75 EVCLDPKWKWQ 86
 QY 1 EICADPKRWVR 12

Search completed: Fri Feb 4 17:51:17 2000
 Job time : 7 secs.

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(TM)

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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 17:50:29 2000; MasPar time 3.74 Seconds
128.410 Million cell updates/sec

Tabular output not generated.

Title: >US-09-150-813-67
Description: (1-12) from US09150813.pep
Perfect Score: 100
Sequence: 1 EICADPKRWVR 12

Scoring table: PAM 150
Gap 15

Searched: 122810 seqs, 40068593 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: p1r60
1:p1r1 2:p1r2 3:p1r3 4:p1r4

Statistics: Mean 25.732; Variance 40.739; scale 0.632

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES							
Result No.	Score	Query Match %	Length	ID	Description	Pred. No.	
1	98	98.0	99	2	JC5295 monocyte chemotactic	1.72e-07	
2	84	84.0	97	2	JC4912 eotaxin precursor - h	1.20e-04	
3	84	84.0	99	2	A60299 monocyte chemotact	1.20e-04	
4	83	83.0	99	2	JC2136 monocyte chemotact	1.89e-04	
5	79	79.0	99	2	JC2336 monocyte chemotact	1.13e-03	
6	79	79.0	99	2	A39296 monocyte chemotact	1.13e-03	
7	78	78.0	92	2	I52322 macrophage inflamma	1.76e-03	
8	78	78.0	95	2	JN0841 interleukin-8 - dog	1.76e-03	
9	78	78.0	101	2	I46997 interleukin-8 - sheep	1.76e-03	
10	78	78.0	101	2	S42496 interleukin-8 - sheep	1.76e-03	
11	78	78.0	103	2	A44253 alveolar macrophage	1.76e-03	
12	78	78.0	103	2	A53096 interleukin-8 precurs	1.76e-03	
13	78	78.0	125	2	I46857 monocyte chemotact	1.76e-03	
14	77	77.0	109	2	JC2417 monocyte chemotact	2.74e-03	
15	75	75.0	101	2	I46871 interleukin-8 - rabbi	6.56e-03	
16	75	75.0	101	2	I46871 interleukin-8 - rabbi	6.56e-03	
17	75	75.0	120	2	I46147 monocyte chemotact	6.56e-03	
18	74	74.0	96	2	JC2478 eotaxin precursor - r	1.01e-02	
19	74	74.0	96	2	I46099 eotaxin precursor - g	1.01e-02	
20	72	72.0	91	1	A28815 monocyte chemotact	2.38e-02	
21	71	71.0	92	2	A32393 macrophage inflamma	3.65e-02	
22	71	71.0	148	2	A30209 PDGF-inducible JE gly	3.65e-02	
23	70	70.0	99	2	A37034 interleukin-8 precurs	5.56e-02	

24	70	70.0	114	1	ETMSL	lymphotactin precursor	5.56e-02
25	69	69.0	50	2	C60407	monocyte adherence-in	8.46e-02
26	69	69.0	92	1	A31767	macrophage inflammat	1.28e-01
27	68	68.0	114	1	ETHUL	lymphotactin precursor	1.94e-01
28	67	67.0	92	2	A30574	macrophage inflammat	1.94e-01
29	67	67.0	92	2	C30552	LD78-beta protein pre	1.94e-01
30	67	67.0	93	2	B35673	macrophage inflammat	1.94e-01
31	67	67.0	148	2	S07723	immediate-early serum	1.94e-01
32	66	66.0	92	2	I46730	immune activation gen	2.92e-01
33	65	65.0	101	2	I48148	Neutrophil attractant	4.39e-01
34	65	65.0	120	2	JE0177	Lymphocyte and monocy	4.39e-01
35	64	64.0	89	2	A53497	pre-B-cell growth-sti	6.57e-01
36	64	64.0	89	2	I53416	interleukin-8 homolog	6.57e-01
37	64	64.0	91	1	A46539	monocyte chemoattract	6.57e-01
38	64	64.0	93	2	I81182	cytokine - mouse	6.57e-01
39	64	64.0	93	2	G01540	cytokine SDF-1-beta -	9.79e-01
40	63	63.0	760	2	S55520	Chitin synthetase I -	1.46e+00
41	62	62.0	116	2	I49555	gene C10 protein - mo	1.46e+00
42	62	62.0	26926	1	I38344	titin, cardiac muscle	1.46e+00
43	60	60.0	103	2	I50417	RSV-induced protein -	3.18e+00
44	60	60.0	103	2	A26736	transformation-induce	3.18e+00
45	59	59.0	204	2	S24641	lymphotoxin - bovine	4.68e+00

ALIGNMENTS

RESULT 1
ENTRY JC5295 #type complete
TITLE monocyte chemotactic protein-2 precursor - human
ORGANISM #formal_name Homo sapiens #common_name man
DATE 02-May-1997 #sequence_revision 18-Jul-1997 #text_change 17-Mar-1999

ACCESSIONS JC5295
REFERENCE Van Collie, E.; Froyen, G.; Nomiya, H.; Miura, R.; Fiten, P.; Van Aelst, I.; Van Damme, J.; Opdenakker, G.
#authors Biochem. Biophys. Res. Commun. (1997) 231:726-730
#journal Human monocyte chemotactic protein-2: cDNA cloning and regulated expression of mRNA in mesenchymal cells.
#title
#cross-references M01D:97224420
#accession JC5295

GENETICS mcp-2
CLASSIFICATION #superfamily macrophage inflammatory protein
FEATURE #domain signal sequence #status predicted #label SIG
1-23 #product monocyte chemotactic protein-2 #status predicted #label MAR
24-99 #length 99 #molecular-weight 11246 #checksum 6596

SUMMARY
Query Match 98.0%; Score 98; DB 2; Length 99;
Best Local Similarity 91.7%; Pred. No. 1.72e-07;
Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 73 EVCADPKRWVR 84
QY 1 EICADPKRWVR 12
I:|||||
:|||||

RESULT 2
ENTRY JC4912 #type complete
TITLE eotaxin precursor - human
ORGANISM #formal_name Homo sapiens #common_name man
DATE 01-Nov-1996 #sequence_revision 01-Nov-1996 #text_change

```

13-Nov-1998
JC4912
JC4912
#accessions
#authors Bartels, J.; Schlueter, C.; Richter, E.; Noso, N.; Kulke, R.;
Christophers, E.; Schroeder, J.M.
#journal Biochem. Biophys. Res. Commun. (1996) 225:1045-1051
#title Human dermal fibroblasts express eotaxin: Molecular cloning,
mRNA expression, and identification of eotaxin sequence
variants.
#accession JC4912
#status preliminary
#molecule_type mRNA
#residues 1-97 #label BAR
#cross-references EMBL:275668; NID:g1531982; PID:e251275; PID:g1531983
#experimental_source dermal fibroblast
COMMENT This protein has eosinophil specific chemotactic activity.
CLASSIFICATION superfamily macrophage inflammatory protein
KEYWORDS fibroblast
FEATURES
1-18
19-97
SUMMARY
#domain signal sequence #status predicted #label SIG\
#product eotaxin #status predicted #label MAT
#length 97 #molecular-weight 10790 #checksum 448
Query Match 84.0%; Score 84; DB 2; Length 97;
Best Local Similarity 75.0%; Pred. No. 1.20e-04;
Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
Db 71 DICADPKKRWQ 82
QY 1 EICADPKRWVR 12
:||||| |||
RESULT 3
ENTRY A60299 #type complete
TITLE monocyte chemoattractant protein 1 precursor - human
ALTERNATE_NAMES MCP-1; glioma-derived monocyte chemotactic factor 1; MCAF;
MCP-1; monocyte chemotactic factor 1; monocyte secretory
protein; tumor-derived chemotactic factor
CONTAINS glioma-derived chemotactic factor 2 (GDGF-2)
ORGANISM #formal_name Homo sapiens #common_name man
DATE 20-Feb-1993 #sequence_revision 20-Feb-1993 #text_change
ACCESSIONS A35474; A33476; S03339; I51841; A60299; A32300; A32396;
A34561; I57488; JCI096
REFERENCE A35474
#authors Shyy, Y.J.; Li, Y.S.; Kolattukudy, P.E.
#journal Biochem. Biophys. Res. Commun. (1990) 169:346-351
#title Structure of human monocyte chemotactic protein gene and its
regulation by TPA.
#cross-references MUID:90290466
#accession A35474
#molecule_type DNA
#residues 1-99 #label SHY
#cross-references GB:M37719; NID:g187447; PID:g487124
REFERENCE A33476
#authors Rollins, B.J.; Stier, P.; Ernst, T.; Wong, G.G.
#journal Mol. Cell. Biol. (1989) 9:4687-4695
#title The human homolog of the JE gene encodes a monocyte secretory
protein.
#cross-references MUID:90097880
#accession A33476
#molecule_type mRNA
#residues 1-99 #label ROL
#cross-references GB:M30816; GB:M31625; GB:M31626; NID:g188701;
PID:g386961
REFERENCE S03339
#authors Yoshimura, T.; Yuhki, N.; Moore, S.K.; Appella, E.; Lerman,
M.T.; Leonard, E.J.
#journal FEBS Lett. (1989) 244:487-493
#title Human monocyte chemoattractant protein-1 (MCP-1). Full-length
cDNA cloning, expression in mitogen-stimulated blood
mononuclear leukocytes, and sequence similarity to mouse
competence gene JE.
#cross-references MUID:89153605
#accession S03339
#status not compared with conceptual translation
#molecule_type mRNA
#residues 1-99 #label YOS
#cross-references GB:X14768; NID:g34513; PID:g34514
#experimental_source glioma cell line U-105MG
REFERENCE I51841
#authors Yoshimura, T.; Leonard, E.J.
#journal Adv. Exp. Med. Biol. (1991) 305:47-56
#title Human monocyte chemoattractant protein-1 (MCP-1).
#cross-references MUID:92095166
#accession I51841
#status preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-99 #label YO2
#cross-references GB:S71513; NID:g240867; PID:g240868
REFERENCE A60299
#authors Bottazzi, B.; Colotta, F.; Sica, A.; Nobili, N.; Mantovani,
A.
#journal Int. J. Cancer (1990) 45:795-797
#title A chemoattractant expressed in human sarcoma cells
(tumor-derived chemotactic factor, TDCF) is identical to
monocyte chemoattractant protein-1/monocyte chemotactic and
activating factor (MCP-1/MCAF).
#accession A60299
#status not compared with conceptual translation
#molecule_type mRNA
#residues 1-99 #label BOT
REFERENCE A32300
#authors Furutani, Y.; Nomura, H.; Notake, M.; Oyama, Y.; Fukui, T.;
Yamada, M.; Larsen, C.G.; Oppenheim, J.J.; Matsushima, K.
#journal Biochem. Biophys. Res. Commun. (1989) 159:249-255
#title Cloning and sequencing of the cDNA for human monocyte
chemotactic and activating factor (MCAF).
#cross-references MUID:89165862
#accession A32300
#status not compared with conceptual translation
#molecule_type mRNA
#residues 1-99 #label FUR
REFERENCE A32396
#authors Robinson, E.A.; Yoshimura, T.; Leonard, E.J.; Tanaka, S.;
Griffin, P.R.; Shabanowitz, J.; Hunt, D.F.; Appella, E.
#journal Proc. Natl. Acad. Sci. U.S.A. (1989) 86:1850-1854
#title Complete amino acid sequence of a human monocyte
chemoattractant, a putative mediator of cellular immune
reactions.
#cross-references MUID:89184525
#accession A32396
#molecule_type protein
#residues 'X', 25-99 #label ROB
REFERENCE A34561
#authors Decock, B.; Conings, R.; Lenaerts, J.P.; Billiau, A.; Van
Damme, J.
#journal Biochem. Biophys. Res. Commun. (1990) 167:904-909
#title Identification of the monocyte chemotactic protein from human
osteosarcoma cells and monocytes: detection of a novel
N-terminally processed form.
#cross-references MUID:90211336
#accession A34561
#molecule_type protein
#residues 29-33, 'XX', 36-52; 82-92 #label DEC
REFERENCE I57488
#authors Li, Y.S.; Shyy, Y.J.; Wright, J.G.; Valente, A.J.; Cornhill,
J.F.; Kolattukudy, P.E.
#journal Mol. Cell. Biochem. (1993) 126:61-68
#title The expression of monocyte chemotactic protein (MCP-1) in
human vascular endothelium in vitro and in vivo.
#cross-references MUID:94150478
#accession I57488
#status translated from GB/EMBL/DBJ
#molecule_type mRNA

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Sat Feb 5 12:04:46 2000

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Query Match      83.0%; Score 83; DB 2; Length 99;
Best Local Similarity 66.7%; Pred. No. 1.89e-04;
Matches      8; Conservative      4; Mismatches 0; Indels 0; Gaps 0;

Db      73 EICADPKQKWQ 84
QY      1 EICADPKRWVR 12
|||||:||||:
1-23
24-99

RESULT 5
ENTRY      JC2336      #type complete
TITLE      monocyte chemoattractant protein-1 - bovine
ORGANISM   #formal_name Bos primigenius indicus #common_name zebu cattle
DATE       20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change
03-May-1996

ACCESSIONS JC2336
REFERENCE   JC2336
#authors   Wempe, F.; Kuhlmann, J. K.; Scheit, K. H.
#journal   Biochem. Biophys. Res. Commun. (1994) 202:1272-1279
#title     Characterization of the bovine monocyte chemoattractant
           protein-1 gene.
#cross-references MUID:94338337
#accession JC2336
#molecule_type protein
##residues 1-99 ##label WEM

GENETICS
#gene      MCP-1
#introns   26/1; 65/2
#intron     #superfamily macrophage inflammatory protein
CLASSIFICATION #length 99 #molecular_weight 11114 #checksum 9401
SUMMARY

Query Match      79.0%; Score 79; DB 2; Length 99;
Best Local Similarity 66.7%; Pred. No. 1.13e-03;
Matches      8; Conservative      4; Mismatches 0; Indels 0; Gaps 0;

Db      73 EICADPKQKWQ 84
QY      1 EICADPKRWVR 12
|||||:||||:
1-23
24-99

RESULT 6
ENTRY      A39296      #type complete
TITLE      monocyte chemoattractant protein 1 precursor - bovine
ORGANISM   #formal_name Bos primigenius taurus #common_name cattle
DATE       03-Aug-1992 #sequence_revision 03-Aug-1992 #text_change
31-Oct-1997

ACCESSIONS A39296; B39296
REFERENCE   A39296
#authors   Wempe, F.; Henschen, A.; Scheit, K. H.
#journal   DNA Cell Biol. (1991) 10:671-679
#title     Gene expression and cDNA cloning identified a major basic
           protein constituent of bovine seminal plasma as bovine
           monocyte-chemoattractant protein-1 (MCP-1).
#cross-references MUID:92096117
#accession A39296
#molecule_type mRNA
##residues 1-99 ##label WEM
##cross-references GB:M84602; GB:M85264; NID:g163394; PID:g163395
#accession B39296
#molecule_type protein
##residues 50-68, 'X', 70-74, 'X', 76 ##label WE2
##experimental_source seminal vesicle
##expression #superfamily macrophage inflammatory protein
KEYWORDS    glycoprotein
FEATURE     1-23
           24-99
           94
           #domain signal sequence #status predicted #label SIG\
           #product monocyte chemoattractant protein 1 #status
           predicted #label MAT\
           #binding_site carbohydrate (Asn) (covalent) #status
           predicted
           #length 99 #molecular_weight 11114 #checksum 9401
SUMMARY

#residues      1-99 ##label LIV
#cross-references GB:S69738; NID:g545464; PID:g545465
JC1096
#authors   Ye, Q. N.; Su, G. F.; Yuan, Y.; Huang, C. F.
#journal   Chinese J. Microbiol. Immunol. (1994) 14:29-32
#title     The PCR, cloning and sequencing of human monocyte
           chemoattractant protein-1 (MCP-1) gene.
#accession JC1096
#molecule_type mRNA
##residues 24-28, 'O', 30-99 ##label YEQ

GENETICS
#gene      GDB:SCVA2
#map_position 17q11.2-17q12
CLASSIFICATION #cross-references GDB:125279; OMIM:158105
KEYWORDS    cytokine; glycoprotein; inflammation; proglutamic acid
FEATURE     1-23
           24-99
           29-99
           24
           37
           #domain signal sequence #status predicted #label SIG\
           #product monocyte chemoattractant protein 1 #status
           experimental #label MAT\
           #product monocyte chemoattractant protein 1, short form
           #status experimental #label MAT2\
           #modified site pyrrolidone carboxylic acid (Gln) (in
           mature form) #status experimental\
           #binding_site carbohydrate (Asn) (covalent) #status
           predicted
           #length 99 #molecular_weight 11025 #checksum 7984
SUMMARY

Query Match      84.0%; Score 84; DB 2; Length 99;
Best Local Similarity 75.0%; Pred. No. 1.20e-04;
Matches      9; Conservative      3; Mismatches 0; Indels 0; Gaps 0;

Db      73 EICADPKQKWQ 84
QY      1 EICADPKRWVR 12
|||||:||||:
1-23
24-99

RESULT 4
ENTRY      JC2136      #type complete
TITLE      monocyte chemoattractant protein-1 precursor - pig
ORGANISM   #formal_name Sus scrofa domestica #common_name domestic pig
DATE       30-Sep-1993 #sequence_revision 20-Aug-1994 #text_change
17-Mar-1999

ACCESSIONS JC2136; S57498
REFERENCE   JC2136
#authors   Hosang, K.; Knoke, I.; Klaudiny, J.; Wempe, F.; Wuttke, W.;
           Scheit, K. H.
#journal   Biochem. Biophys. Res. Commun. (1994) 199:962-968
#title     Porcine luteal cells express monocyte chemoattractant
           protein-1 (MCP-1): Analysis by polymerase chain reaction
           and cDNA cloning.
#cross-references MUID:94183284
#accession JC2136
#molecule_type mRNA
##residues 1-99 ##label HOS
##status   preliminary
REFERENCE   S57497
#authors   Zach, O.
#submission Submitted to the EMBL Data Library, July 1994
#accession S57498
#molecule_type mRNA
##residues 1-99 ##label ZAC
##status   preliminary
#cross-references EMBL:X79416; NID:g872312; PID:g872313
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS    glycoprotein
FEATURE     1-23
           24-99
           94
           #domain signal sequence #status predicted #label SIG\
           #product monocyte chemoattractant protein-1 #status
           predicted #label MAT\
           #binding_site carbohydrate (Asn) (covalent) #status
           predicted
           #length 99 #molecular_weight 10976 #checksum 9768
SUMMARY

```



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Query Match      79.0%; Score 79; DB 2; Length 99;
Best Local Similarity 66.7%; Pred. No. 1.13e-03;
Matches      8; Conservative 4; Mismatches 0; Indels 0; Gaps 0;

Db 73 ELCADPKQKWQ 84
I:|||||:|:
QY 1 EICADPKRWVR 12

RESULT 7
ENTRY 152322 #type complete
TITLE macrophage inflammatory protein-1alpha - rat
ORGANISM #formal_name Rattus norvegicus #common_name Norway rat
DATE 29-May-1998 #sequence_revision 29-May-1998 #text_change
02-Jul-1998
ACCESSIONS 152322
REFERENCE 152322
#authors Shi, M.M.; Godleski, J.J.; Paulauskis, J.D.
#journal Biochem. Biophys. Res. Commun. (1995) 211:289-295
#title Molecular cloning and posttranscriptional regulation of
macrophage inflammatory protein-1 alpha in alveolar
macrophages.
#cross-references MUID:95298037
#accession 152322
##status preliminary; translated from GB/EMBL/DBJ
##molecule_type mRNA
##residues 1-92 ##label RES
##cross-references EMBL:U2414; NID:G790632; PID:G790633
CLASSIFICATION #superfamily macrophage inflammatory protein
SUMMARY #length 92 #molecular-weight 10335 #checksum 3184

Query Match      78.0%; Score 78; DB 2; Length 92;
Best Local Similarity 75.0%; Pred. No. 1.76e-03;
Matches      9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 71 QICADPKETWQ 82
I:|||||:|:
QY 1 EICADPKRWVR 12

RESULT 8
ENTRY JN0841 #type complete
TITLE interleukin-8 - dog
ORGANISM #formal_name Canis lupus familiaris #common_name dog
DATE 19-May-1994 #sequence_revision 19-May-1994 #text_change
12-Apr-1995
ACCESSIONS JN0841
REFERENCE JN0841
#authors Ishikawa, J.; Suzuki, S.; Hotta, K.; Hirota, Y.; Mizuno, S.;
Suzuki, K.
#journal Gene (1993) 131:305-306
#title Cloning of a canine gene homologous to the human
interleukin-8-encoding gene.
#cross-references MUID:94010328
#accession JN0841
##molecule_type DNA
##residues 1-95 ##label ISH
COMMENT This protein is a polymorphonuclear leukocytes chemotactic factor
and is involved in the host defense function.
GENETICS
#introns 22/1; 67/2
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 95 #molecular-weight 10611 #checksum 3157

Query Match      78.0%; Score 78; DB 2; Length 95;
Best Local Similarity 66.7%; Pred. No. 1.76e-03;
Matches      8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 75 EVCLDPKQKWQ 86
I:|||||:|:
QY 1 EICADPKRWVR 12

Query Match      79.0%; Score 79; DB 2; Length 99;
Best Local Similarity 66.7%; Pred. No. 1.13e-03;
Matches      8; Conservative 4; Mismatches 0; Indels 0; Gaps 0;

Db 73 ELCADPKQKWQ 84
I:|||||:|:
QY 1 EICADPKRWVR 12

RESULT 9
ENTRY 146997 #type complete
TITLE interleukin-8 - sheep
ORGANISM #formal_name Ovis sp. #common_name sheep
DATE 21-Feb-1997 #sequence_revision 21-Feb-1997 #text_change
09-May-1997
ACCESSIONS 146997
REFERENCE 146997
#authors Seow, H.F.; Yoshimura, T.; Wood, P.R.; Colditz, I.G.
#journal Immunol. Cell Biol. (1994) 72:398-405
#title Cloning, sequencing, expression and inflammatory activity in
skin of ovine interleukin-8.
#cross-references MUID:95137691
#accession 146997
##status preliminary; translated from GB/EMBL/DBJ
##molecule_type mRNA
##residues 1-101 ##label SEO
##cross-references GB:S74436; NID:G786590; PID:G786591
GENETICS
#gene OIL-8
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 101 #molecular-weight 11292 #checksum 294

Query Match      78.0%; Score 78; DB 2; Length 101;
Best Local Similarity 66.7%; Pred. No. 1.76e-03;
Matches      8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 75 EVCLDPKQKWQ 86
I:|||||:|:
QY 1 EICADPKRWVR 12

RESULT 10
ENTRY S42496 #type complete
TITLE interleukin 8 - sheep
ORGANISM #formal_name Ovis orientalis aries, Ovis ammon aries
DATE 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change
08-Sep-1997
ACCESSIONS S42496
REFERENCE S42496
#authors Legastelois, I.; Greenland, T.; Arnaud, P.; Mornex, J.F.;
Cordier, G.
#submission submitted to the EMBL Data Library, March 1994
#description Nucleotide sequence of ovine interleukin 8 cDNA using
polymerase chain reaction.
#accession S42496
##status preliminary
##molecule_type mRNA
##residues 1-101 ##label LEG
##cross-references EMBL:X78306; NID:G463253; PID:G463254
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 101 #molecular-weight 11292 #checksum 294

Query Match      78.0%; Score 78; DB 2; Length 101;
Best Local Similarity 66.7%; Pred. No. 1.76e-03;
Matches      8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 75 EVCLDPKQKWQ 86
I:|||||:|:
QY 1 EICADPKRWVR 12

RESULT 11
ENTRY A44253 #type complete
TITLE alveolar macrophage chemotactic factor-I (AMCF-I)
ORGANISM #formal_name Sus scrofa domestica #common_name domestic pig
DATE 30-Apr-1993 #sequence_revision 18-Nov-1994 #text_change
23-Feb-1996
ACCESSIONS A44253
REFERENCE A44253
#authors Goodman, R.B.; Foster, D.C.; Mathewes, S.L.; Osborn, S.G.;

```



```
##journal      Kuijper, J.L.; Forstrom, J.W.; Martin, T.R.
##title        Biochemistry (1992) 31:10483-10490
##cross-references GB:M57440; NID:g165469; PID:g165470
##classification #superfamily macrophage inflammatory protein
##summary      #length 125 #molecular-weight 13776 #checksum 4498

Query Match      78.0%; Score 78; DB 2; Length 125;
Best Local Similarity 72.7%; Pred. No. 1.76e-03;
Matches      8; Conservative      3; Mismatches 0; Indels 0; Gaps 0;

Db      75 EVCLDPKRWQ 86
QY      1 EICADPKRWVR 12

RESULT 12
ENTRY      A53096      #type complete
TITLE      interleukin-8 precursor - pig
ORGANISM   #formal_name Sus scrofa domestica #common_name domestic pig
DATE       02-Jun-1995 #sequence_revision 02-Jun-1995 #text_change
08-Sep-1997

ACCESSIONS A53096
REFERENCE   Lin, G.; Pearson, A.E.; Scamurra, R.W.; Zhou, Y.; Baarsch,
M.J.; Weiss, D.J.; Murtaugh, M.P.
#journal   J. Biol. Chem. (1994) 269:77-85
#title     Regulation of interleukin-8 expression in porcine alveolar
macrophages by bacterial lipopolysaccharide.
#cross-references MUID:94103307
#accession A53096
#status    preliminary
#molecule_type mRNA
#residues  1-103 #label LIN
#cross-references GB:M86923; NID:g164520; PID:g164521
CLASSIFICATION #superfamily beta-thromboglobulin
#length 103 #molecular-weight 11633 #checksum 8835
SUMMARY

Query Match      78.0%; Score 78; DB 2; Length 103;
Best Local Similarity 66.7%; Pred. No. 1.76e-03;
Matches      8; Conservative      3; Mismatches 1; Indels 0; Gaps 0;

Db      75 EVCLDPKRWQ 86
QY      1 EICADPKRWVR 12

RESULT 13
ENTRY      I46857      #type complete
TITLE      monocyte chemoattractant protein-1 - rabbit
ORGANISM   #formal_name Oryctolagus cuniculus #common_name domestic
rabbit
DATE       14-Feb-1997 #sequence_revision 14-Feb-1997 #text_change
09-May-1997

ACCESSIONS I46857
REFERENCE   Yoshimura, T.; Yuhki, N.
#journal   J. Immunol. (1991) 146:3493-3498
#title     Neutrophil attractant/activation protein-1 and monocyte
chemoattractant protein-1 in rabbit: cDNA cloning and their
expression in spleen cells.
#cross-references MUID:91225489
#accession I46857
#status    preliminary; translated from GB/EMBL/DBJ
```

```
##molecule_type mRNA
##residues      1-125 #label YOS
##cross-references GB:M57440; NID:g165469; PID:g165470
##classification #superfamily macrophage inflammatory protein
##summary      #length 125 #molecular-weight 13776 #checksum 4498

Query Match      78.0%; Score 78; DB 2; Length 125;
Best Local Similarity 72.7%; Pred. No. 1.76e-03;
Matches      8; Conservative      3; Mismatches 0; Indels 0; Gaps 0;

Db      74 ICADPKRWQ 84
QY      2 ICADPKRWVR 12

RESULT 14
ENTRY      A54678      #type complete
TITLE      monocyte chemoattractant protein 3 precursor - human
ORGANISM   #formal_name Homo sapiens #common_name man
DATE       28-Oct-1994 #sequence_revision 28-Oct-1994 #text_change
17-Mar-1999

ACCESSIONS A54678; JCI478; S32222
REFERENCE   Opendakker, G.; Fiten, P.; Nys, G.; Froyen, G.; Van Roy, N.;
Speleman, F.; Laureys, G.; Van Damme, J.
#journal   Genomics (1994) 21:403-408
#title     The human MCP-3 gene (SCYA7): cloning, sequence analysis, and
assignment to the C-C chemokine gene cluster on chromosome
17q11.2-q12
#cross-references MUID:94373065
#accession A54678
#molecule_type DNA
#residues  1-109 #label OPD
#cross-references GB:X72309
REFERENCE   JCI478
#authors   Opendakker, G.; Froyen, G.; Fiten, P.; Proost, P.; Van Damme,
J.
#journal   Biochem. Biophys. Res. Commun. (1993) 191:535-542
#title     Human monocyte chemoattractant protein-3 (MCP-3): Molecular
cloning of the cDNA and comparison with other chemokines.
#cross-references MUID:93213290
#accession JCI478
#molecule_type mRNA
#residues  1-109 #label OP2
REFERENCE   S32222
#authors   Minty, A.; Chalon, P.; Guillemot, J.C.; Kaghad, M.; Liauzun,
P.; Magazin, M.; Miloux, B.; Minty, C.; Ferrara, P.; Vita,
N.; Lupker, J.; Shire, D.; Ferrara, P.; Caput, D.
#submission submitted to the EMBL Data Library, March 1993
#description Molecular cloning of MCP-3: a human monocyte-derived monocyte
chemoattractant protein.
#accession S32222
#molecule_type mRNA
#residues  1-109 #label MIN
#cross-references EMBL:X71087; NID:g288396; PID:g288397
COMMENT     This protein induces proteinase secretion and chemotaxis by
macrophages and monocytes.

GENETICS
#gene      GDB:SCYA7; SCYA6; MCP-3
#cross-references GDB:I38473; OMIM:158106
#map_position 17q11-17q12
#introns   36/1; 75/2
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS     cytokine; glycoprotein; inflammation
FEATURE      1-33
34-109
39
#domain signal sequence #status predicted #label SIG\
#product monocyte chemoattractant protein 3 #status
predicted #label MAT\
#binding site carbohydrate (Asn) (covalent) #status
predicted
#length 109 #molecular-weight 12356 #checksum 1535
SUMMARY
```

```

Query Match      77.0%; Score 77; DB 2; Length 109;
Best Local Similarity 66.7%; Pred. No. 2.74e-03;
Matches      8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db      83 EICADPTOKWVQ 94
||||| :||:
QY      1 EICADPKRWVR 12

RESULT 15
ENTRY      JC2417      #type complete
TITLE      monocyte chemoattractant protein-2 precursor - pig
ORGANISM   #formal_name Sus scrofa domestica #common_name domestic pig
DATE       24-Feb-1995 #sequence_revision 24-Feb-1995 #text_change
          17-Mar-1999
ACCESSIONS JC2417
REFERENCE   JC2417
#authors   Hosang, K.; Knoke, I.; Klaudiny, J.; Wenpe, F.; Wuttke, W.;
          Scheit, K.H.
#journal   Biochem. Biophys. Res. Commun. (1994) 205:148-153
#title     Porcine luteal cells express monocyte chemoattractant
          protein-2 (MCP-2): Analysis by cDNA cloning and northern
          analysis.
#cross-references MUID:95091716
#accession JC2417
#molecule_type mRNA
#residues 1-99 #label HOS
#experimental_source corpus luteum
CLASSIFICATION #superfamily macrophage inflammatory protein
FEATURE
1-23
24-99
SUMMARY      #length 99 #molecular-weight 10903 #checksum 7556
          #domain signal sequence #status predicted #label SIG\
          #product monocyte chemoattractant protein-2 #status
          predicted #label MAT

Query Match      75.0%; Score 75; DB 2; Length 99;
Best Local Similarity 58.3%; Pred. No. 6.56e-03;
Matches      7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db      73 EVCADPOKWVQ 84
||||| :||:
QY      1 EICADPKRWVR 12

```

Search completed: Fri Feb 4 17:50:54 2000
 Job time : 25 secs.

W P S R L H (TM)

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Mpsrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 17:49:54 2000; MasPar time 3.50 Seconds
72.823 Million cell updates/sec

Tabular output not generated.

Title: >US-09-150-813-67
Description: (1-12) from US09150813.pep
Perfect Score: 100
Sequence: 1 EICADPKRWVR 12

Scoring table: PAM 150
Gap 15

Searched: 170751 seqs, 21266608 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: a-geneseq35
1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
14:part14 15:part15 16:part16 17:part17 18:part18
19:part19 20:part20 21:part21 22:part22 23:part23
24:part24 25:part25 26:part26 27:part27 28:part28
29:part29 30:part30 31:part31 32:part32 33:part33
34:part34 35:part35 36:part36 37:part37 38:part38
39:part39

Statistics: Mean 19.095; Variance 70.039; scale 0.273

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	ID	Description	Pred. No.
1	98	98.0	72	13	Chemoattractant MCP-2	1.53e-02
2	98	98.0	109	26	Human beta-chemokine	1.53e-02
3	98	98.0	109	29	Human MC propeptide	1.53e-02
4	90	90.0	104	31	Murine monocyte chemo	9.60e-02
5	90	90.0	104	31	Mouse monocyte chemo	9.60e-02
6	87	87.0	71	26	Dro13+ chemokine beta	1.90e-01
7	87	87.0	75	31	Chemokine MCP-4 prote	1.90e-01
8	87	87.0	75	26	Bac 3 chemokine beta	1.90e-01
9	87	87.0	77	26	Bac 2 chemokine beta	1.90e-01
10	87	87.0	79	26	Dro11/2 chemokine bet	1.90e-01
11	87	87.0	82	26	Bac 1 chemokine beta	1.90e-01
12	87	87.0	82	24	Stem cell mobilising	1.90e-01
13	87	87.0	98	26	Human chemokine beta	1.90e-01
14	87	87.0	98	31	Human monocyte chemo	1.90e-01
15	87	87.0	98	28	Monocyte chemotactic	1.90e-01
16	87	87.0	98	17	Human chemokine beta	1.90e-01

Monocyte chemoattract 3.74e-01
Monocyte chemoattract 3.74e-01
Monocyte chemoattract 3.74e-01
des(2-8) MCP-1 3.74e-01
Macrophage chemoattra 3.74e-01
Monocyte chemotactic 3.74e-01
Sense MCP-1. 3.74e-01
MCP. 3.74e-01
(3-Ala) MCP-1. 3.74e-01
Monocyte chemotactic 3.74e-01
(28-Asp) MCP-1. 3.74e-01
(24-Arg) MCP-1. 3.74e-01
Mature human monocyte 3.74e-01
Peptide from human g1 3.74e-01
Mature MCP-1. 3.74e-01
Macrophage chemoattra 3.74e-01
Human monocyte chemo- 3.74e-01
MCF. 3.74e-01
Chemoattractant prote 3.74e-01
Human monocyte chemoa 3.74e-01
Human MCF precursor. 9.15e-01
Sequence of bovine p6 1.14e+00
Amino acid sequence o 1.14e+00
Pancreas expressed ch 1.14e+00
Human eotaxin. 1.14e+00
Human eosinocyte CC t 1.14e+00
Sequence of p6 precu 1.14e+00
Human monocyte chemoa 1.78e+00

ALIGNMENTS

RESULT 1
ID R70804 standard; Protein; 72 AA.
AC R70804;
DT 29-AUG-1995 (first entry)
DE Chemoattractant MCP-2
KW Chemoattractant; MCP-2; heparanase; heparin; heparan sulfate;
arthritis; restenosis; cancer; wound healing.
OS Homo sapiens.
PN 09504158-A.
PD 09-FEB-1995.
PF 26-JUL-1994; U08207.
PR 29-JUL-1993; US-099866.
PR 13-OCT-1993; US-136117.
PA (UPJO) UPJOHN CO.
PI Hoogwerf AJ, Ledbetter SR;
DR WPI: 95-082239/11.
PT Screening for cpds. with anti-heparanase activity - by detecting
inhibition of heparin or heparan sulphate degradation,
potentially useful for treating arthritis, restenosis, cancer.
PS Claim 13; Page 53; 60pp; English.
CC Purified heparanases, prepared under reducing conditions and
activated with transglutaminase, are given in R70786-804. Most
are prepared by reverse transcription of mRNA from activated human
leukocytes, then cloning of the cDNA into pVIL1392 baculovirus
vector, and expression in Sf9 cells in the presence of reduced
glutathione and dithiothreitol.
SQ Sequence 72 AA;

Query Match 98.0%; Score 98; DB 13; Length 72;
Best Local Similarity 91.7%; Pred. No. 1.53e-02;
Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 46 evcadpkerwvr 57
Qy 1 EICADPKRWVR 12
1:|||||

RESULT 2
ID W26655 standard; Protein; 109 AA.
AC W26655;

DE 16-FEB-1998 (first entry)
 DE Human beta-chemokine H1305 (MCP-2).
 KW H1305; MCP-2; chemokine; human; Chemotactant; Chemotaxis;
 KW virus infection; HIV; therapy; wound healing; tumour; antibody.
 OS Homo sapiens.
 PN WO9725427-A1.
 PD 17-JUL-1997.
 PF 10-JAN-1997; U00379.
 PR 12-JAN-1996; US-566395.
 PA (GENY) GENETICS INST INC.
 PI Lavallee ER, McCoy JM, Racie LA;
 DR WPI; 97-372866/34.
 DR N-PSDB; T91023.
 PT New human beta-chemokine, H1305 and corresponding DNA - used in the
 PT treatment of viral infection, e.g. HIV, and in wound healing
 PS Claim 1: Page 12-13; 21pp; English.
 CC This protein comprises human beta-chemokine H1305, also known as
 CC MCP-2. Its sequence was deduced from a claimed cDNA clone (see
 CC T91023) isolated from a human peripheral blood mononuclear cell
 CC cDNA library. Also claimed are: (1) a host cell, preferably
 CC mammalian, transformed with a H1306 polynucleotide operably linked
 CC to an expression control sequence; (2) a recombinantly produced
 CC H1305 protein; and (3) a composition comprising an antibody which
 CC specifically reacts with the H1305 protein. The H1305 protein
 CC may be used in a composition for the treatment of a mammalian
 CC subject (claimed). It is thought to have chemokine activities and
 CC may therefore have an effect on chemotaxis or migration of blood
 CC cells. It may be useful for inhibiting viral replication,
 CC including replication of HIV, and may also be used for treatment of
 CC wounds and to raise monoclonal and polyclonal antibodies which
 CC specifically react with H1305. Such antibodies may be used for
 CC therapy of certain tumours as they are capable of blocking the
 CC ligand binding of the H1305 protein or may promote clearance of
 CC the protein from the patient.
 SQ Sequence 109 AA;

Query Match 98.08; Score 98; DB 26; Length 109;
 Best Local Similarity 91.7%; Pred. No. 1.53e-02;
 Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 83 evcadpkerwvr 94
 :|||||
 QY 1 EICADPKRWVR 12

RESULT 3
 ID W42072 standard; Protein; 109 AA.
 AC W42072;
 DE 09-JUN-1998 (first entry)
 DE Human MC proprotein.
 KW Human monocyte chemotactic proprotein; MCP; Incyte clone; allergy;
 KW macrophage; diagnostic assay; body fluid; lung; biopsy;
 KW autoimmune disease; AIDS; asthma; rheumatoid arthritis; NIDDM;
 KW breast cancer; bladder.
 OS Homo sapiens.
 PN WO9802459-A1.
 PD 22-JAN-1998.
 PF 15-JUL-1997; U12349.
 PR 15-JUL-1996; US-683655.
 PA (INCY) INCYTE PHARM INC.
 PI Au-Young J, Coleman R, Hillman JL;
 DR WPI; 98-110529/10.
 DR N-PSDB; V09218.
 PT New human monocyte chemotactic proprotein - has homology to CC
 PT chemokine(s) useful for identifying agent for treating auto-immune
 PT diseases or allergic responses
 PS Claim 1: Pages 38-39; 53pp; English.
 CC The is a human monocyte chemotactic proprotein sequence. Its cDNA was
 CC first identified in Incyte clone 965517 from a breast cDNA library.
 CC Antisense nucleotides can be used to control human MCP expression
 CC especially where it may lead to inappropriate monocyte or macrophage
 CC activity causing damage associated with allergic responses to organs
 CC such as the lungs. Antisense nucleotides and MCP cDNA may be used

CC in diagnostic assays of body fluids or biopsied tissues to detect
 CC expression levels of MCP. MCP cDNA may also be useful for
 CC treatment of disorders such as asthma, rheumatoid arthritis, NIDDM
 CC or cancer of the breast or bladder. Human MCP protein can be used to
 CC identify agonists, antagonists or inhibitors to modulate the activity of
 CC MCP in allergic responses or autoimmune diseases such as AIDS.
 SQ Sequence 109 AA;

Query Match 98.0%; Score 98; DB 29; Length 109;
 Best Local Similarity 91.7%; Pred. No. 1.53e-02;
 Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 83 evcadpkerwvr 94
 :|||||
 QY 1 EICADPKRWVR 12

RESULT 4
 ID W56088 standard; Protein; 104 AA.
 AC W56088;
 DE 17-AUG-1998 (first entry)
 DE Murine monocyte chemoattractant protein 5.
 KW Murine; mouse; monocyte chemoattractant protein; MCP-4; MCP-5; chemokine;
 KW immune response; cancer; AIDS; malaria; parasitic infection.
 OS Mus spretus.
 PN WO9814573-A1.
 PD 09-APR-1998.
 PR 30-SEP-1997; U17900.
 PA (GENO) GEN HOSPITAL CORP.
 PI Garcia-Zepeda E, Luster AD, Sarafi M;
 DR WPI; 98-240080/21.
 DR N-PSDB; V28592.

PT Monocyte chemoattractant proteins, MCP-4 and MCP-3 - used to develop
 PT products for treating e.g. cancers, infections, asthma, cystic
 PT fibrosis, rhinitis, atherosclerosis or inflammatory bowel disease
 PS Claim 25; Page 54; 106pp; English.
 CC The present sequence represents murine monocyte chemoattractant protein 5
 CC (MCP-5). The MCP-4 and MCP-5 have activity in stimulating chemotactic
 CC activity. The proteins can be used for treating cancers, e.g. a
 CC lymphoma (e.g. Hodgkin's lymphoma), a plasmacytoma, a melanoma, a
 CC sarcoma, a tumour within the lung or gastrointestinal tract, or
 CC infectious disease such as AIDS or malaria. Antagonists to the proteins
 CC can be used for treating e.g. asthma, chronic obstructive pulmonary
 CC disease, cystic fibrosis, sinusitis, rhinitis, atherosclerosis,
 CC glomerulonephritis, multiple sclerosis, inflammatory bowel disease,
 CC arthritis or adult respiratory distress syndrome. Infections such as
 CC parasitic infections may also be treated with a molecule that inhibits
 CC MCP-4 or MCP-5 expression.
 SQ Sequence 104 AA;

Query Match 90.0%; Score 90; DB 31; Length 104;
 Best Local Similarity 83.3%; Pred. No. 9.60e-02;
 Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 72 eicadpkerwvk 83
 :|||||
 QY 1 EICADPKRWVR 12

RESULT 5
 ID W57322 standard; Protein; 104 AA.
 AC W57322;
 DE 11-AUG-1998 (first entry)
 DE Mouse monocyte chemotactic protein 5.
 KW Mouse; murine; monocyte chemotactic protein 5; MCP-5; diagnosis;
 KW immune system disorder; infection; inflammation; allergy; tumour;
 KW cardiovascular disease.
 OS Mus sp.
 PN WO9812324-A1.
 PD 26-MAR-1998.
 PR 11-SEP-1997; U16105.
 PR 08-NOV-1996; US-744419.

Sat Feb 5 12:04:44 2000

CC treat rheumatoid arthritis, autoimmune, chronic inflammatory or
 CC infectious diseases, allergies, prostaglandin dependent fever and
 CC bone marrow failure, silicosis, sarcoidosis, hyper-eosinophilic
 CC syndrome, lung inflammation and atherosclerosis. Ck betalo cDNA can
 CC be used to isolate genes encoding similar peptides, in gene therapy
 CC and for chromosome identification.
 CC Sequence 71 AA;

Query Match 87.0%; Score 87; DB 26; Length 71;
 Best Local Similarity 83.3%; Pred. No. 1.90e-01;
 Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 45 eicadpkekwwq 56
 |||||:|:

QY 1 EICADPKRWVR 12
 |||||:|:

RESULT 7
 ID W56690 standard; Protein: 75 AA.

AC W56690;
 DT 23-JUL-1998 (first entry)
 DE Chemokine MCP-4 protein sequence.
 KW MCP-4; MCP-4 receptor; antagonist; agonist; inflammatory disease;
 KW viral; bacterial; parasite; infection; allergic reaction;
 KW asthmatic; atherosclerosis; arthritis; chemokine.
 OS Homo sapiens.
 PN W09809171-A1.
 PD 05-MAR-1998.
 PF 27-AUG-1997; G023113.
 PR 28-AUG-1996; GB-017923.
 PA (SMIK) SMITHKLINE BEECHAM CORP.
 PA (SMIK) SMITHKLINE BEECHAM PLC.
 PI Bergsma D, Berkhout T, Elshourbagy N, Groot PHE,
 PI White J;
 DR WPI: 98-179584/16.

PT Use of the chemokine MCP-4 receptor - for identifying agonists or
 PT antagonists which can be used for treating e.g. infections, allergic
 PT and asthmatic reactions, atherosclerosis and arthritis
 PS Disclosure; Fig 2; 25pp; English.
 CC This is the chemokine MCP-4 receptor antagonists and agonists. MCP-4
 CC methods for identifying MCP-4 receptor antagonists and agonists with MCP-4
 CC receptor agonists can be identified by contacting a compound with MCP-4
 CC receptor and measuring the change in a functional response or a second
 CC messenger system associated with the receptor. MCP-4 receptor
 CC antagonists can be identified using the MCP-4 receptor in combination
 CC with the chemokine MCP-4 which may be labelled or unlabelled. The MCP-4
 CC receptor is expressed on the surface of a host cell or in a membrane
 CC preparation and is used in the form of the isolated protein. It is
 CC prepared by transfecting a mammalian cell line with an expression vector
 CC comprising a nucleic acid sequence encoding the MCP-4 receptor, and
 CC culturing the cell line in a culture medium. Susceptibility to disease
 CC states associated with abnormal expression of the MCP-4 receptor can be
 CC diagnosed by measuring the level of MCP-4 and/or MCP-3 in a sample taken
 CC from a patient. Neutralising antibodies to the MCP-4 receptor can be
 CC identified using MCP-4, MCP-3, RANTES, MCP-2, MCP-1 or eotaxin. The
 CC agonists and antagonists identified can be used for treating disease
 CC states associated with the MCP-4 receptor, e.g. inflammatory states
 CC arising from viral, bacterial and parasitic infection, allergic and
 CC asthmatic reactions, atherosclerosis and arthritis. The products can also
 CC be used for detection and diagnosis.
 CC Sequence 75 AA;

Query Match 87.0%; Score 87; DB 31; Length 75;
 Best Local Similarity 83.3%; Pred. No. 1.90e-01;
 Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 49 eicadpkekwwq 60
 |||||:|:

QY 1 EICADPKRWVR 12
 |||||:|:

RESULT 8
 ID W22673 standard; Protein: 75 AA.

PR 18-SEP-1996; US-026882.
 PA (BLOO-) CENT BLOOD RES INC.
 PI Gonzalo J, Gutierrez-Ramos J;
 DR WPI: 98-217264/19.
 DR N-PSDB: V30789, V30790.
 DR Monocyte chemotactic protein-5 - used to develop products for
 PT treating e.g. immune system disease or tumours
 PT allergy, cardiovascular disease or tumours
 PT Claim 28; Page 79; 101pp; English.
 PS The present sequence represents monocyte chemotactic protein 5 (MCP-5).
 CC The MCP-5 protein stimulates chemotaxis of eosinophils, monocytes and
 CC lymphocytes, but not neutrophils, and so is likely to be involved with
 CC eosinophil-, monocyte- and/or lymphocyte-mediated inflammations.
 CC Products of the present invention can be used for treating e.g.
 CC bacterial, fungal or parasitic infections of for tumour cell killing,
 CC or for promoting wound healing. The products can also be used for
 CC limiting an unwanted inflammatory response or an allergic response,
 CC e.g. in inflammatory bowel disease, glomerular inflammation, lupus
 CC membranous nephropathy, glomerulo-sclerosis, chronic hepatic
 CC inflammation, fibrotic lung disease, idiopathic pulmonary disease,
 CC adult respiratory distress syndrome, sarcoidosis, pleural effusions
 CC which occur secondary to various diseases, respiratory allergies,
 CC asthma, atherosclerosis, cardiovascular disease, arthritis,
 CC endometriosis, gingival inflammation, inflammatory skin conditions,
 CC delayed-type hypersensitivity responses, or allergic inflammation.
 CC The products can also be used for detection, diagnosis and drug
 CC screening.
 CC Sequence 104 AA;

Query Match 90.0%; Score 90; DB 31; Length 104;
 Best Local Similarity 83.3%; Pred. No. 9.60e-02;
 Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 72 eicadpkekwwk 83
 |||||:|:

QY 1 EICADPKRWVR 12
 |||||:|:

RESULT 6
 ID W22675 standard; Protein: 71 AA.

AC W22675;
 DT 19-MAR-1998 (first entry)
 DE Drol3+ chemokine betalo0 or monocyte chemotactic protein 4 variant.
 DE Human; chemokine betalo0; Ck betalo0; treatment; antagonist;
 KW solid tumour; infection; autoimmune disease; asthma; antibody;
 KW fibrotic disease; psoriasis; neurodegenerative disease;
 KW wound healing; haematopoiesis regulation; gene therapy;
 KW chromosome identification; monocyte chemotactic protein 4;
 KW leukaemia; MCP-4; Drol3+ variant.
 OS Homo sapiens.
 PN W09731098-A1.
 PD 28-AUG-1997.
 PR 23-FEB-1996; WO-U02598.
 PR (HUMA-) HUMAN GENOME SCI INC.
 PA Adams M, Alderson R, Applebaum E, Li H, Li Y, Lima SH,
 PI Parmelee D, White J;
 DR WPI: 97-435153/40.
 DR Polypeptide encoding chemokine beta 4 and monocyte chemotactic
 PT protein 4 - useful to treat tumours, autoimmune disease, infection,
 PT asthma and fibrosis
 PT Example 11; Fig 5; 83pp; English.
 PS The present sequence is human chemokine betalo0 (Ck betalo0) or
 CC monocyte chemotactic protein 4 (MCP-4) Drol3+ variant, which can
 CC be used to treat patients deficient in Ck betalo0, while a Ck betalo0
 CC antagonist can be used to reduce excessive levels of Ck betalo0. Ck
 CC betalo0 can be used to treat leukaemia, solid tumours, chronic or
 CC opportunistic infections, autoimmune diseases, asthma, fibrotic
 CC diseases, psoriasis and neurodegenerative diseases. It also
 CC promotes wound healing, regulates haematopoiesis and generates
 CC antibodies. Labelled Ck betalo0 can be used to identify its cognate
 CC receptor, while cells expressing the receptor can be used to screen
 CC compounds for (ant)agonist activity. The antagonist can be used to

AC W22673;
 DT 19-MAR-1998 (first entry)
 DE Bac 3 chemokine beta10 or monocyte chemotactic protein 4 variant.
 KW Human; chemokine beta10; Ck beta10; treatment; antagonist;
 KW solid tumour; infection; autoimmune disease; asthma; antibody;
 KW fibrotic disease; psoriasis; neurodegenerative disease;
 KW wound healing; haematopoiesis regulation; gene therapy;
 KW chromosome identification; monocyte chemotactic protein 4;
 KW leukaemia; MCP-4; Bac 3 variant.
 OS Homo sapiens.
 PN WO9731098-A1.
 PD 28-AUG-1997.
 PF 23-FEB-1996; U02598.
 PR 23-FEB-1996; WO-U02598.
 PA (HUMA-) HUMAN GENOME SCI INC.
 PI Adams M, Alderson R, Applebaum E, Li H, Li Y, Lima SH,
 PI Parmelee D, White J;
 DR WPI: 97-435153/40.
 PT Polypeptide encoding chemokine beta 4 and monocyte chemotactic
 protein 4 - useful to treat tumours, autoimmune disease, infection,
 PT asthma and fibrosis
 PS Example 11; Fig 5; 83pp; English.
 CC The present sequence is human chemokine beta10 (Ck beta10) or
 CC monocyte chemotactic protein 4 (MCP-4) Bac 3 variant, which can be
 CC used to treat patients deficient in Ck beta10, while a Ck beta10
 CC antagonist can be used to reduce excessive levels of Ck beta10. Ck
 CC beta10 can be used to treat leukaemia, solid tumours, chronic or
 CC opportunistic infections, autoimmune diseases, asthma, fibrotic
 CC diseases, psoriasis and neurodegenerative diseases. It also
 CC promotes wound healing, regulates haematopoiesis and generates
 CC antibodies. Labelled Ck beta10 can be used to identify its cognate
 CC receptor, while cells expressing the receptor can be used to screen
 CC compounds for (ant)agonist activity. The antagonist can be used to
 CC treat rheumatoid arthritis, allergies, autoimmune, chronic inflammatory or
 CC infectious diseases, psoriasis, prostaglandin dependent fever and
 CC bone marrow failure, silicosis, sarcoidosis, hyper-eosinophilic
 CC syndrome, lung inflammation and atherosclerosis. Ck beta10 cDNA can
 CC be used to isolate genes encoding similar peptides, in gene therapy
 CC and for chromosome identification.
 SQ Sequence 75 AA;

Query Match 87.0%; Score 87; DB 26; Length 75;
 Best Local Similarity 83.3%; Pred. No. 1.90e-01;
 Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
 Db 49 eicadpkekvwq 60
 QY 1 EICADPKERWVR 12
 |||||:|:|:|

RESULT 9
 ID W22672 standard; Protein; 77 AA.
 AC W22672;
 DT 19-MAR-1998 (first entry)
 DE Bac 2 chemokine beta10 or monocyte chemotactic protein 4 variant.
 KW Human; chemokine beta10; Ck beta10; treatment; antagonist;
 KW solid tumour; infection; autoimmune disease; asthma; antibody;
 KW fibrotic disease; psoriasis; neurodegenerative disease;
 KW wound healing; haematopoiesis regulation; gene therapy;
 KW chromosome identification; monocyte chemotactic protein 4;
 KW leukaemia; MCP-4; Bac 2 variant.
 OS Homo sapiens.
 PN WO9731098-A1.
 PD 28-AUG-1997.
 PF 23-FEB-1996; U02598.
 PR 23-FEB-1996; WO-U02598.
 PA (HUMA-) HUMAN GENOME SCI INC.
 PI Adams M, Alderson R, Applebaum E, Li H, Li Y, Lima SH,
 PI Parmelee D, White J;
 DR WPI: 97-435153/40.
 PT Polypeptide encoding chemokine beta 4 and monocyte chemotactic
 protein 4 - useful to treat tumours, autoimmune disease, infection,
 PT asthma and fibrosis

PS Example 11; Fig 5; 83pp; English.
 CC The present sequence is human chemokine beta10 (Ck beta10) or
 CC monocyte chemotactic protein 4 (MCP-4) Bac 2 variant, which can be
 CC used to treat patients deficient in Ck beta10, while a Ck beta10
 CC antagonist can be used to reduce excessive levels of Ck beta10. Ck
 CC beta10 can be used to treat leukaemia, solid tumours, chronic or
 CC opportunistic infections, autoimmune diseases, asthma, fibrotic
 CC diseases, psoriasis and neurodegenerative diseases. It also
 CC promotes wound healing, regulates haematopoiesis and generates
 CC antibodies. Labelled Ck beta10 can be used to identify its cognate
 CC receptor, while cells expressing the receptor can be used to screen
 CC compounds for (ant)agonist activity. The antagonist can be used to
 CC treat rheumatoid arthritis, allergies, autoimmune, chronic inflammatory or
 CC infectious diseases, psoriasis, prostaglandin dependent fever and
 CC bone marrow failure, silicosis, sarcoidosis, hyper-eosinophilic
 CC syndrome, lung inflammation and atherosclerosis. Ck beta10 cDNA can
 CC be used to isolate genes encoding similar peptides, in gene therapy
 CC and for chromosome identification.
 SQ Sequence 77 AA;

Query Match 87.0%; Score 87; DB 26; Length 77;
 Best Local Similarity 83.3%; Pred. No. 1.90e-01;
 Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
 Db 51 eicadpkekvwq 62
 QY 1 EICADPKERWVR 12
 |||||:|:|:|

RESULT 10
 ID W22674 standard; Protein; 79 AA.
 AC W22674;
 DT 19-MAR-1998 (first entry)
 DE Droll/2 chemokine beta10 or monocyte chemotactic protein 4 variant.
 KW Human; chemokine beta10; Ck beta10; treatment; antagonist;
 KW solid tumour; infection; autoimmune disease; asthma; antibody;
 KW fibrotic disease; psoriasis; neurodegenerative disease;
 KW wound healing; haematopoiesis regulation; gene therapy;
 KW chromosome identification; monocyte chemotactic protein 4;
 KW leukaemia; MCP-4; Droll/2 variant.
 OS Homo sapiens.
 PN WO9731098-A1.
 PD 28-AUG-1997.
 PF 23-FEB-1996; U02598.
 PR 23-FEB-1996; WO-U02598.
 PA (HUMA-) HUMAN GENOME SCI INC.
 PI Adams M, Alderson R, Applebaum E, Li H, Li Y, Lima SH,
 PI Parmelee D, White J;
 DR WPI: 97-435153/40.
 PT Polypeptide encoding chemokine beta 4 and monocyte chemotactic
 protein 4 - useful to treat tumours, autoimmune disease, infection,
 PT asthma and fibrosis
 PS Example 11; Fig 5; 83pp; English.
 CC The present sequence is human chemokine beta10 (Ck beta10) or
 CC monocyte chemotactic protein 4 (MCP-4) Droll/2 variant, which can
 CC be used to treat patients deficient in Ck beta10, while a Ck beta10
 CC antagonist can be used to reduce excessive levels of Ck beta10. Ck
 CC beta10 can be used to treat leukaemia, solid tumours, chronic or
 CC opportunistic infections, autoimmune diseases, asthma, fibrotic
 CC diseases, psoriasis and neurodegenerative diseases. It also
 CC promotes wound healing, regulates haematopoiesis and generates
 CC antibodies. Labelled Ck beta10 can be used to identify its cognate
 CC receptor, while cells expressing the receptor can be used to screen
 CC compounds for (ant)agonist activity. The antagonist can be used to
 CC treat rheumatoid arthritis, allergies, autoimmune, chronic inflammatory or
 CC infectious diseases, psoriasis, prostaglandin dependent fever and
 CC bone marrow failure, silicosis, sarcoidosis, hyper-eosinophilic
 CC syndrome, lung inflammation and atherosclerosis. Ck beta10 cDNA can
 CC be used to isolate genes encoding similar peptides, in gene therapy
 CC and for chromosome identification.
 SQ Sequence 79 AA;

Query Match 87.0%; Score 87; DB 26; Length 79;
 Best Local Similarity 83.3%; Pred. No. 1.90e-01;
 Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

```

PR 24-OCT-1995; US-006051.
PA (SMIX ) SMITHKLINE BEECHAM CORP.
PI Kreider BL, Li H, Pelus L, White JR;
DR WPI: 97-258956/23.
PT Ten new chemokine(s) able to mobilise stem cells - used where
PT increased levels of haematopoietic cells are required, e.g. to
PS Claim 7; Page 11-12; 24pp; English.
CC The present sequence represents a chemokine, CKbeta-10, which is capable
CC of mobilising stem cells. The chemokine can be used therapeutically to
CC improve stem cell mobilisation, optionally together with a colony
CC stimulating factor or other haematoregulatory agent. It can be used
CC wherever an increased level of haematopoietic cells is needed, e.g. to
CC increase the immune response to chronic infection (particularly
CC bacteria or parasitic), to promote wound healing, in (transplant)
CC patients with reduced bone marrow function as a result of
CC immunosuppressive treatment or disease, and to provide more rapid
CC regeneration of bone marrow after treatment for neoplastic or viral
CC diseases. The induced stem cells may be harvested for subsequent return
CC to the patient, optionally after they have been genetically manipulated
CC to deliver a selected gene product (gene therapy). The cells may be
CC co-administered with a cytotoxic drug.
SQ Sequence 82 AA;

Query Match 87.0%; Score 87; DB 24; Length 82;
Best Local Similarity 83.3%; Pred. No. 1.90e-01;
Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 56 eicadpkekvwq 67
QY 1 EICADPKERWVR 12

RESULT 13
ID W22670 standard; Protein; 98 AA.
AC W22670;
DT 19-MAR-1998 (first entry)
DE Human chemokine beta10 or monocyte chemotactic protein 4.
KW Human; chemokine beta10; Ck beta10; treatment; antagonist;
KW solid tumour; infection; autoimmune disease; asthma; antibody;
KW fibrotic disease; psoriasis; neurodegenerative disease;
KW wound healing; haematopoiesis regulation; gene therapy;
KW chromosome identification; monocyte chemotactic protein 4;
KW leukaemia; MCP-4.
OS Homo sapiens.
FH Key 1..23 Location/Qualifiers
FT Peptide /label= sig_peptide
FT Peptide 24..98
FT Peptide /label= mat_peptide
PN WO9731098-A1.
PD 28-AUG-1997.
PF 23-FEB-1996; U02598.
PR (HUMA-) HUMAN GENOME SCI INC.
PA Adams M, Alderson R, Applebaum E, Li H, Li Y, Lima SH,
PI Parmelee D, White J;
PI Parmelee D, White J;
DR WPI: 97-435153/40.
DR N-PSDB; T85029.
PT Polypeptide encoding chemokine beta 4 and monocyte chemotactic
PT protein 4 - useful to treat tumours, autoimmune disease, infection,
PT asthma and fibrosis
PS Claim 1; Fig 2; 83pp; English.
CC The present sequence is human chemokine beta10 (Ck beta10) or
CC monocyte chemotactic protein 4 (MCP-4), which can be used to treat
CC patients deficient in Ck beta10, while a Ck beta10 antagonist can
CC be used to reduce excessive levels of Ck beta10. Ck beta10 can be
CC used to treat leukaemia, solid tumours, chronic or opportunistic
CC infections, autoimmune diseases, asthma, fibrotic diseases,
CC psoriasis, and neurodegenerative diseases. It also promotes wound
CC healing, regulates haematopoiesis and generates antibodies.
CC Labelled Ck beta10 can be used to identify its cognate receptor,
CC while cells expressing the receptor can be used to screen compounds

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Best Local Similarity 83.3%; Pred. No. 1.90e-01;
Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 53 eicadpkekvwq 64
QY 1 EICADPKERWVR 12

RESULT 11
ID W22671 standard; Protein; 82 AA.
AC W22671;
DT 19-MAR-1998 (first entry)
DE Human chemokine beta10 or monocyte chemotactic protein 4 variant.
KW Human; chemokine beta10; Ck beta10; treatment; antagonist;
KW solid tumour; infection; autoimmune disease; asthma; antibody;
KW fibrotic disease; psoriasis; neurodegenerative disease;
KW wound healing; haematopoiesis regulation; gene therapy;
KW chromosome identification; monocyte chemotactic protein 4;
KW leukaemia; MCP-4; Bac 1 variant.
OS Homo sapiens.
PN WO9731098-A1.
PD 28-AUG-1997.
PF 23-FEB-1996; U02598.
PR (HUMA-) HUMAN GENOME SCI INC.
PA Adams M, Alderson R, Applebaum E, Li H, Li Y, Lima SH,
PI Parmelee D, White J;
PI Parmelee D, White J;
DR WPI: 97-435153/40.
PT Polypeptide encoding chemokine beta 4 and monocyte chemotactic
PT protein 4 - useful to treat tumours, autoimmune disease, infection,
PT asthma and fibrosis
PS Example 11; Fig 5; 83pp; English.
CC The present sequence is human chemokine beta10 (Ck beta10) or
CC monocyte chemotactic protein 4 (MCP-4) Bac 1 variant, which can be
CC used to treat patients deficient in Ck beta10, while a Ck beta10
CC antagonist can be used to reduce excessive levels of Ck beta10. Ck
CC beta10 can be used to treat leukaemia, solid tumours, chronic or
CC opportunistic infections, autoimmune diseases, asthma, fibrotic
CC diseases, psoriasis and neurodegenerative diseases. It also
CC promotes wound healing, regulates haematopoiesis and generates
CC antibodies. Labelled Ck beta10 can be used to identify its cognate
CC receptor, while cells expressing the receptor can be used to screen
CC compounds for (antagonist) activity. The antagonist can be used to
CC treat rheumatoid arthritis, autoimmune, chronic inflammatory or
CC infectious diseases, allergies, prostaglandin dependent fever and
CC bone marrow failure, silicosis, sarcoidosis, hyper-eosinophilic
CC syndrome, lung inflammation and atherosclerosis. Ck beta10 cDNA can
CC be used to isolate genes encoding similar peptides, in gene therapy
CC and for chromosome identification.
SQ Sequence 82 AA;

Query Match 87.0%; Score 87; DB 26; Length 82;
Best Local Similarity 83.3%; Pred. No. 1.90e-01;
Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 56 eicadpkekvwq 67
QY 1 EICADPKERWVR 12

RESULT 12
ID W17665 standard; peptide; 82 AA.
AC W17665;
DT 16-DEC-1997 (first entry)
DE Stem cell mobilising chemokine CKbeta-10.
KW Haematopoietic cell; parasitic infection; colony stimulating factor;
KW haematoregulator; immune response; bacterial infection; transplant;
KW wound healing; bone marrow; immunosuppression; regeneration;
KW neoplastic disease; viral disease; gene therapy; cytotoxic drug.
OS Synthetic.
PN WO9715594-A1.
PD 01-MAY-1997.
PF 23-OCT-1996; U16959.

```


CC for (ant)agonist activity. The antagonist can be used to treat
 CC rheumatoid arthritis, autoimmune, chronic inflammatory or
 CC infectious diseases, allergies, prostatic/inflammatory fever and
 CC bone marrow failure, silicosis, sarcoidosis, hyper-eosinophilic
 CC syndrome, lung inflammation and atherosclerosis. Ck beta10 cDNA can
 CC be used to isolate genes encoding similar peptides, in gene therapy
 CC and for chromosome identification.
 SQ Sequence 98 AA;

Query Match 87.0%; Score 87; DB 26; Length 98;
 Best Local Similarity 83.3%; Pred. No. 1.90e-01;
 Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 72 eicadpkewwq 83
 |||||:|:
 QY 1 EICADPKERWVR 12

RESULT 14

ID W56087 standard; Protein; 98 AA.
 AC W56087;
 DT 17-AUG-1998 (first entry)
 DE Human monocyte chemoattractant protein 4.
 KW Human; monocyte chemoattractant protein; MCP-4; MCP-5; chemokine;
 KW immune response; cancer; AIDS; malaria; parasitic infection.
 OS Homo sapiens.
 PN W09814573-A1.
 PD 09-APR-1998.
 PF 30-SEP-1997; U17900.
 PR 30-SEP-1996; US-027128.
 PA (GPHO) GEN HOSPITAL CORP.
 PI Garcia-Zapeda E, Luster AD, Sarafi M;
 DR WPI: 98-240080/21.
 DR N-PSDB; V28591.
 PT Monocyte chemoattractant proteins, MCP-4 and MCP-3 - used to develop
 PT products for treating e.g. cancers, infections, asthma, cystic
 PT fibrosis, rhinitis, atherosclerosis or inflammatory bowel disease
 PS Claim 8; Page 53; 10pp; English.
 CC The present sequence represents human monocyte chemoattractant protein 4
 CC (MCP-4). The MCP-4 and MCP-5 have activity in stimulating chemotactic
 CC activity. The proteins can be used for treating cancers, e.g. a
 CC lymphoma (e.g. Hodgkin's lymphoma), a plasmacytoma, a melanoma, a
 CC sarcoma, a tumour within the lung or gastrointestinal tract, or
 CC infectious disease such as AIDS or malaria. Antagonists to the proteins
 CC can be used for treating e.g. asthma, chronic obstructive pulmonary
 CC disease, cystic fibrosis, sinusitis, rhinitis, atherosclerosis,
 CC glomerulonephritis, multiple sclerosis, inflammatory bowel disease,
 CC arthritis or adult respiratory distress syndrome. Infections such as
 CC parasitic infections may also be treated with a molecule that inhibits
 CC MCP-4 or MCP-5 expression.
 SQ Sequence 98 AA;

Query Match 87.0%; Score 87; DB 31; Length 98;
 Best Local Similarity 83.3%; Pred. No. 1.90e-01;
 Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 72 eicadpkewwq 83
 |||||:|:
 QY 1 EICADPKERWVR 12

RESULT 15

ID W30191 standard; Protein; 98 AA.
 AC W30191;
 DT 21-MAY-1998 (first entry)
 DE Monocyte chemoattractant protein 5.
 KW Monocyte chemoattractant protein 5.
 KW chemokine; inhibitor; antiinflammatory; atherosclerosis;
 KW Crohn's disease; arthritis; angiogenesis; tumour; metastasis;
 KW therapy; diagnosis; medical imaging.
 OS Homo sapiens.
 FH Key
 FT Peptide Location/Qualifiers
 1..23

FT FT /label= Sig_peptide
 FT 24..98
 FT /label= Mat_protein
 FT /note= "(Claim 4)"
 PN W09735982-A2.
 PD 02-OCT-1997;
 PR 26-MAR-1997; U04898.
 PR 27-MAR-1996; US-622851.
 PA (ICOS-) ICOS CORP.
 PI Godiska R, Gray PW;
 DR WPI: 97-489645/45.
 DR N-PSDB: T90880.
 PT Polynucleotide encoding monocyte chemotactic protein-5 - useful in
 PT treatment of e.g. inflammation, atherosclerosis, angiogenesis and
 PT tumours
 PS Claim 1; Page 36-37; 47pp; English.
 CC This polypeptide comprises human macrophage-derived
 CC monocyte chemotactic protein-5 (MCP-5), a novel C-C chemokine.
 CC Its amino acid sequence was deduced from a cDNA clone (see
 CC T90880 and T90883) isolated from a human macrophage cDNA
 CC library. A claimed method for producing MCP-5 comprises
 CC culturing a host cell that is stably transformed or transfected
 CC with MCP-5 polynucleotide. Also claimed is a hybridoma that
 CC produces a monoclonal antibody (MAB) that is specifically
 CC reactive with the mature MCP-5. MCP-5 (or its analogues and
 CC fragments) is used to enhance the immune response in cases of
 CC wounds or infections, while its inhibitors (e.g. the MAB) are
 CC useful as anti-inflammatory agents for treatment of atherosclerosis
 CC Crohn's disease, also for treatment of atherosclerosis.
 CC angiogenesis and tumour growth (or metastasis). The MCP-5
 CC inhibitors can possibly also be used to reduce the damaging effects
 CC of chemo- and radio-therapy on myeloid progenitor cells, and to
 CC inhibit replication of HIV. MCP-5 can also be used to identify
 CC its cognate receptor, while MCP-5 peptides (or the analogues or
 CC receptors) are used to modulate MCP-5 activity and to identify
 CC MCP-5 agonists and antagonists.
 SQ Sequence 98 AA;
 Query Match 87.0%; Score 87; DB 28; Length 98;
 Best Local Similarity 83.3%; Pred. No. 1.90e-01;
 Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
 Db 72 eicadpkewwq 83
 |||||:|:
 QY 1 EICADPKERWVR 12
 Search completed: Fri Feb 4 17:50:12 2000
 Job time : 18 secs.

21	61	62.9	133 11	009006	BETA CHEMOKINE EXODUS-	6.90e-01
22	61	62.9	133 11	009002	SMALL INDUCIBLE CYTOKI	6.90e-01
23	61	62.9	133 11	009002	T01D3.3 PROTEIN.	6.90e-01
24	58	59.8	109 4	043927	CXC CHEMOKINE PRECURSO	2.62e+00
25	58	59.8	109 4	043927	CXC CHEMOKINE PRECURSO	2.62e+00
26	57	58.8	188 5	045136	ECO Q PROTEIN (FRAGMEN	4.06e+00
27	57	58.8	188 5	045136	ECO Q PROTEIN (FRAGMEN	4.06e+00
28	56	57.7	94 14	098157	VMIP-1B.	6.24e+00
29	56	57.7	167 7	046767	MHC CLASS I HEAVY CHAI	6.24e+00
30	56	57.7	248 10	081404	1-AMINOCYCLOPROPANE-1-	6.24e+00
31	56	57.7	430 2	025417	RVV.	6.24e+00
32	56	57.7	466 10	082719	ACC SYNTHASE (EC 4.4.1	6.24e+00
33	56	57.7	491 10	043747	1-AMINOCYCLOPROPANE-1-	6.24e+00
34	56	57.7	497 10	042610	1-AMINOCYCLOPROPANE-1-	6.24e+00
35	56	57.7	575 5	024662	HYPOTHETICAL 65.2 KD P	6.24e+00
36	56	57.7	991 10	080820	T26J13.4 PROTEIN.	6.24e+00
37	56	57.7	1032 11	062780	RNA HELICASE.	6.24e+00
38	55	56.7	108 2	050686	INSERTION ELEMENT IS61	9.56e+00
39	55	56.7	857 14	073288	ENVELOPE GLYCOPROTEIN.	9.56e+00
40	55	56.7	857 14	073288	ENVELOPE GLYCOPROTEIN.	9.56e+00
41	55	56.7	858 14	073292	ENVELOPE GLYCOPROTEIN.	9.56e+00
42	55	56.7	858 14	073291	ENVELOPE GLYCOPROTEIN.	9.56e+00
43	55	56.7	858 14	073290	ENVELOPE GLYCOPROTEIN.	9.56e+00
44	54	55.7	399 14	068409	ORF UL154.	1.46e+01
45	54	55.7	568 14	068954	MAJOR ENVELOPE GLYCOPR	1.46e+01

ALIGNMENTS

RESULT	1	PRELIMINARY;	PRT;	395 AA.
ID	035188			
AC	035188			
DT	01-JAN-1998	(TREMREL. 05, CREATED)		
DT	01-JAN-1998	(TREMREL. 05, LAST SEQUENCE UPDATE)		
DT	01-NOV-1998	(TREMREL. 08, LAST ANNOTATION UPDATE)		
DE	NEUROTACTIN.			
GN	SCYD1.			

OS	MUS MUSCULUS (MOUSE).			
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;			
OC	SCIUROGNATHI; MURIDAE; MURINAE; MUS.			
RN	[1]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE; 97320499.			
RA	PAN Y., CLARE L., HONG Z., DOLICH S., DEEDS J., GONZALO J., VATH J.,			
RA	GOSELIN M., MA J., DUSSAULT B., WOLFF B., ALPERIN A., CULPEPPER J.,			
RA	GUTIERREZ-RAMOS J.C., GEARING D.;			
RT	"Neurotactin," a membrane-anchored chemokine upregulated in brain			
RT	inflammation.";			
RL	NATURE 387:611-617(1997).			
DR	EMBL; AF010586; G2317698; -			
DR	MGI; 1097153; SCYD1.			
DR	PFAM; PF00048; i18; 1.			
SQ	SEQUENCE 395 AA; 42098 MW; E3CD0612 CRC32;			

Query Match	79.4%;	Score 77;	DB 11;	Length 395;
Best Local Similarity	81.8%;	Pred. No. 3.08e-04;		
Matches	9;	Conservative 1;	Mismatches 1;	Indels 0; Gaps 0;

Db	73	FCADPKKKVQ 83
Qy	2	ICADPKKKVQ 12

RESULT	2	PRELIMINARY;	PRT;	395 AA.
ID	035933			
AC	035933			
DT	01-JAN-1998	(TREMREL. 05, CREATED)		
DT	01-JAN-1998	(TREMREL. 05, LAST SEQUENCE UPDATE)		
DT	01-NOV-1998	(TREMREL. 08, LAST ANNOTATION UPDATE)		
DE	FRACTALKINE.			
OS	MUS MUSCULUS (MOUSE).			
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;			
OC	SCIUROGNATHI; MURIDAE; MURINAE; MUS.			

M P E R L E H (TM)

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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 17:57:30 2000; MasPar time 5.04 Seconds
129.952 Million cell updates/sec

Tabular output not generated.

Title: >US-09-150-813-68
Description: (1-12) from US09150813.pep
Perfect Score: 97
Sequence: 1 DICADPKKKVQ 12

Scoring table: PAM 150
Gap 15

Searched: 179066 segs, 54579741 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: sptrembl9
1:sp-archaea 2:sp-bacteria 3:sp-fungi 4:sp-human
5:sp-invertebrate 6:sp-mammal 7:sp-mhc 8:sp-organelle
9:sp-phage 10:sp-plant 11:sp-rodent 12:sp-unclassified
13:sp-vertebrate 14:sp-virus

Statistics: Mean 25.541; Variance 34.851; scale 0.733

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description	Pred. No.
1	77	79.4	395	11	035188	NEUROTACTIN.	3.08e-04
2	77	79.4	395	11	035933	FRACTALKINE.	3.08e-04
3	73	75.3	91	4	043646	RANTES PRECURSOR.	2.29e-03
4	72	74.2	95	14	098158	ORF K6.	3.76e-03
5	71	73.2	134	4	000585	BETA CHEMOKINE EXODUS-	6.15e-03
6	69	71.1	92	11	088430	CC CHEMOKINE ABCD-1.	1.63e-02
7	69	71.1	97	11	089093	CC CHEMOKINE ST38 PREC	1.63e-02
8	69	71.1	97	6	062812	INTERLEUKIN-8 (FRAGMEN	2.64e-02
9	68	70.1	119	4	000175	MP1F-2.	4.25e-02
10	67	69.1	120	4	015467	IL-10-INDUCIBLE CHEMOK	6.83e-02
11	66	68.0	80	4	014745	LD78 ALPHA BETA PRECUR	6.83e-02
12	66	68.0	97	13	057411	LYMPHOTACTIN PRECURSOR	6.83e-02
13	66	68.0	101	13	093238	CC CHEMOKINE-1.	1.09e-01
14	65	67.0	93	4	000626	MACROPHAGE-DERIVED CHE	1.09e-01
15	65	67.0	95	4	099664	CHEMOKINE EXODUS.	1.09e-01
16	65	67.0	106	11	P97884	B CHEMOKINE EXODUS.	2.77e-01
17	65	67.0	109	11	O55038	B LYMPHOCYTE CHEMOKIN	2.77e-01
18	63	64.9	397	4	P78423	CX3C CHEMOKINE PRECURS	4.38e-01
19	63	64.9	1224	5	P91309	CODED FOR BY C. ELEGAN	
20	62	63.9	760	3	Q99126	CHITIN SYNTHETASE 1.	

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RN  [1]
RP  SEQUENCE FROM N.A.
RC  STRAIN-BALB/C; TISSUE-BRAIN;
RA  ROSSI D., HARDIMAN G., COPELAND N., GILBERT D.J., JENKINS N.,
RA  ZLOTNIK A., BAZAN J.F.;
RL  SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
DR  EMBL; U92565; G2459677; -
DR  PFAM; PF00048; I18; 1.
SQ  SEQUENCE 395 AA; 42040 MW; 3997A113 CRC32;

Query Match
Best Local Similarity 79.4%; Score 77; DB 11; Length 395;
Matches 9; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db  73 FCADPKKKWQ 83
QY  2 ICADPKKKWQ 12

RESULT 3
ID  O43646; PRELIMINARY; PRT; 91 AA.
AC  O43646;
DT  01-JUN-1998 (TREMBLREL. 06, CREATED)
DT  01-JUN-1998 (TREMBLREL. 06, LAST SEQUENCE UPDATE)
DE  RANTES PRECURSOR.
GN  SCYA5.
OS  HOMO SAPIENS (HUMAN).
OC  EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC  CATARRHINI; HOMINIDAE; HOMO.
RN  [1]
RA  JANG J.S., KIM B.E.;
RL  SUBMITTED (JAN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
RN  [2]
RP  SEQUENCE FROM N.A.
RA  NOMIYAMA H.;
RL  "Structure of a region of 181 kb containing five CC chemokine
RL  genes.";
RL  SUBMITTED (AUG-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR  EMBL; AF043341; G2905632; -
DR  EMBL; AF088219; G3719366; -
DR  PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
KW  SIGNAL.
FT  SIGNAL. 1 23 POTENTIAL.
FT  CHAIN 24 91 RANTES.
SQ  SEQUENCE 91 AA; 9990 MW; CF404FAD CRC32;

Query Match
Best Local Similarity 75.3%; Score 73; DB 4; Length 91;
Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db  71 OVCANPEKKWVR 82
QY  1 DICADPKKKWQ 12

RESULT 4
ID  Q98158; PRELIMINARY; PRT; 95 AA.
AC  Q98158; O12569;
DT  01-FEB-1997 (TREMBLREL. 02, CREATED)
DT  01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
DE  ORF K6.
OS  KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS.
OC  VIRUSES; DSDNA VIRUSES. NO RNA STAGE; HERPESVIRIDAE;
OC  GAMMAHERPESVIRINAE; RHADINOVIRUS.
RN  [1]
RP  SEQUENCE FROM N.A.
RX  MEDLINE; 97094384.
RA  MOORE P.S., BASHOFF C., WEISS R.A., CHANG Y.;
RT  "Molecular mimicry of human cytokine and cytokine response pathway
RT  genes by KSHV.";

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RL  SCIENCE 274:1739-1744(1996).
RN  [2]
RP  SEQUENCE FROM N.A.
RX  MEDLINE; 97121480.
RA  RUSSO J.J., BOHENZKY R.A., CHIEN M.C., CHEN J., YAN M., MADDALENA D.,
RA  PARRY J.P., PERUZZI D., EDELMAN I.S., CHANG Y., MOORE P.S.;
RT  "Nucleotide sequence of the Kaposi sarcoma-associated herpesvirus
RT  (HHV8).";
RN  [3]
RP  PROC. NATL. ACAD. SCI. U.S.A. 93:14862-14867(1996).
RN  [3]
RP  SEQUENCE FROM N.A.
RA  RUSSO J.J., BOHENZKY R.A., CHIEN M.C., CHEN J., YAN M., MADDALENA D.,
RA  PARRY J.P., PERUZZI D., EDELMAN I.S., CHANG Y., MOORE P.S.;
RL  SUBMITTED (OCT-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
RN  [4]
RP  SEQUENCE FROM N.A.
RA  NICHOLAS J., ROVOLO V.R., BURNS W.H., SANDFORD G., WAN X., CIUFO D.,
RA  HENDRICKSON S., GUO H.G., HAYWARD G.S., REITZ M.S.;
RL  SUBMITTED (NOV-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
RN  [5]
RP  SEQUENCE FROM N.A.
RA  RUSSO J.J., BOHENZKY R.A., CHIEN M.C., CHEN J., YAN M., MADDALENA D.,
RA  PARRY J.P., PERUZZI D., EDELMAN I.S., CHANG Y., MOORE P.S.;
RL  SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
RN  [6]
RP  SEQUENCE FROM N.A.
RA  RUSSO J.J., BOHENZKY R.A., CHIEN M.C., CHEN J., YAN M., MADDALENA D.,
RA  PARRY J.P., PERUZZI D., EDELMAN I.S., CHANG Y., MOORE P.S.;
RL  SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
RN  [7]
RP  SEQUENCE FROM N.A.
RA  SUN R., LIN S.-F., MILLER G.;
RL  SUBMITTED (SEP-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
DR  EMBL; U75698; G1718266; -
DR  EMBL; U74585; G1658273; -
DR  EMBL; U93872; G2246546; -
DR  EMBL; U71366; G3551763; -
DR  PFAM; PF00048; I18; 1.
KW  HYPOTHETICAL PROTEIN.
SQ  SEQUENCE 95 AA; 10485 MW; 5283348D CRC32;

Query Match
Best Local Similarity 74.2%; Score 72; DB 14; Length 95;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db  74 QICADPSKNWVR 85
QY  1 DICADPKKKWQ 12

RESULT 5
ID  O00585; PRELIMINARY; PRT; 134 AA.
AC  O00585;
DT  01-JUL-1997 (TREMBLREL. 04, CREATED)
DT  01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
DE  BETA CHEMOKINE EXODUS-2.
OS  HOMO SAPIENS (HUMAN).
OC  EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC  CATARRHINI; HOMINIDAE; HOMO.
RN  [1]
RP  SEQUENCE FROM N.A.
RA  HROMAS R.A., GRAY P., KLEMSZ M., FIFE K., BROXMEYER H.;
RL  SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
RN  [2]
RP  SEQUENCE FROM N.A.
RX  MEDLINE; 97400322.
RA  HEDRICK J.A., ZLOTNIK A.;
RT  "Identification and characterization of a novel beta chemokine
RT  containing six conserved cysteines.";

```


Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 72 OFGDPKQEWVQ 83
QY 1 DICADPKKKVQ 12

RESULT 10
ID O15467 PRELIMINARY; PRT; 120 AA.
AC O15467;
DT 01-JAN-1998 (TREMBLREL. 05, CREATED)
DT 01-JAN-1998 (TREMBLREL. 05, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE IL-10-INDUCIBLE CHEMOKINE.
GN ILINCK OR SCYAL6.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RA HEDRICK J.A.; HELMS A.; GORMAN D.; ZLOTNIK A.;
RL SUBMITTED (NOV-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=LIVER;
RA SHODAI K.; HIESHIMA K.; FUKUDA S.; IIO M.; MIURA R.; IMAI T.;
RA YOSHIE O.; NOMIYAMA H.;
RN [3]
RP SEQUENCE FROM N.A.
RA NOMIYAMA H.;
RT "Structure of a region of 181 kb containing five CC chemokine genes."
RT genes."
RL SUBMITTED (AUG-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [4]
RP SEQUENCE FROM N.A.
RX MEDLINE: 98308096.
RA YOUNG B.S.; ZHANG S.; BROXMEYER H.E.; ANTOL K.; FRASER M.J. JR.;
RA HANGOC G.; KWON B.S.;
RT "Isolation and characterization of LMC, a novel lymphocyte and monocytic chemoattractant human CC chemokine, with myelosuppressive activity."
RT activity."
RL BIOCHEM. BIOPHYS. RES. COMMUN. 247:217-222(1998).
DR ENBL; U91746; G2581781;
DR ENBL; AB007454; D1024963;
DR ENBL; AF088219; G3719365;
DR ENBL; AF055467; G3395776;
DR PFAM; PF000048; i18; 1.
KW SIGNAL.
SQ SEQUENCE 120 AA; 13600 MW; A079DF66 CRC32;

Query Match 69.1%; Score 67; DB 4; Length 120;
Best Local Similarity 41.7%; Pred. No. 4.25e-02;
Matches 5; Conservative 5; Mismatches 2; Indels 0; Gaps 0;

Db 74 EVCNPNDDWVQ 85
QY 1 DICADPKKKVQ 12

RESULT 11
ID Q14745 PRELIMINARY; PRT; 80 AA.
AC Q14745;
DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
DT 01-JAN-1999 (TREMBLREL. 09, LAST ANNOTATION UPDATE)
DE LD78 ALPHA BETA PRECURSOR (FRAGMENT).
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=BRAIN;

RA ISHIZUKA K.; IGATA-YI R.; NARUSE K.; NAKASHIMA H.; OHUCHI K.;
RA KATSURAGI S.; KIN Y.; OHMOTO Y.; NOMIYAMA H.; IIO M.; MIURA R.;
RA MIYAKAWA T.;
RL SUBMITTED (AUG-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
DR ENBL; D63785; D1010501;
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; i18; 1.
KW SIGNAL.
FT NON_TER 1 1
FT SIGNAL <1 16 POTENTIAL.
FT CHAIN 17 >80 LD78 ALPHA BETA.
FT NON_TER 80 80
SQ SEQUENCE 80 AA; 8857 MW; 3F87F1C6 CRC32;

Query Match 68.0%; Score 66; DB 4; Length 80;
Best Local Similarity 58.3%; Pred. No. 6.83e-02;
Matches 7; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Db 65 QVCADPSEWVQ 76
QY 1 DICADPKKKVQ 12

RESULT 12
ID O57411 PRELIMINARY; PRT; 97 AA.
AC O57411;
DT 01-JUN-1998 (TREMBLREL. 06, CREATED)
DT 01-JUN-1998 (TREMBLREL. 06, LAST SEQUENCE UPDATE)
DT 01-JUN-1998 (TREMBLREL. 06, LAST ANNOTATION UPDATE)
DE LYMPHOTACTIN PRECURSOR.
OS GALLUS GALLUS (CHICKEN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; ARCHOSAURIA; AVES;
OC NEOGNATHAE; GALLIFORMES; PHASIANIDAE; PHASIANINAE; GALLUS.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=SPLEEN;
RA ROSSI D.L.; BAZAN J.F.; ZLOTNIK A.;
RL SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
DR ENBL; AF006742; G2827882;
KW SIGNAL.
FT SIGNAL 1 24 POTENTIAL.
FT CHAIN 25 97 LYMPHOTACTIN.
SQ SEQUENCE 97 AA; 11131 MW; 3290101C CRC32;

Query Match 68.0%; Score 66; DB 13; Length 97;
Best Local Similarity 63.6%; Pred. No. 6.83e-02;
Matches 7; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Db 72 ICVHPEQKWVQ 82
QY 2 ICADPKKKVQ 12

RESULT 13
ID O93238 PRELIMINARY; PRT; 101 AA.
AC O93238;
DT 01-NOV-1998 (TREMBLREL. 08, CREATED)
DT 01-NOV-1998 (TREMBLREL. 08, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE CC CHEMOKINE-1.
OS CYPRINUS CARPIO (COMMON CARP).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; ACTINOPTERYGII; NEOPTERYGII;
OC TELEOSTEI; EUTELEOSTEI; OSTARIOPHYSI; CYPRINIFORMES; CYPRINOIDEA;
RN [1]
RP SEQUENCE FROM N.A.
RA FUJIKI K.; NAKAO M.; SHIN D.; YANO T.;
RT "cDNA cloning of a carp CC chemokine homologous to mammalian eotaxins."
RL SUBMITTED (JAN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR ENBL; AB010469; D1032417;
SQ SEQUENCE 101 AA; 11266 MW; 9CFBD540 CRC32;

Sat Feb 5 12:04:53 2000

Query Match 68.0%; Score 66; DB 13; Length 101;
 Best Local Similarity 54.5%; Pred. No. 6.83e-02;
 Matches 4; Mismatches 1; Indels 0; Gaps 0;

Db 72 EFCSDPKLRWV 82
 :|||: ||
 QY 1 DICADPKKKWV 11

RESULT 14
 ID O00626 PRELIMINARY; PRT; 93 AA.
 AC O00626;
 DT 01-JUL-1997 (TREMREL. 04, CREATED)
 DT 01-JUL-1997 (TREMREL. 04, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
 DE MACROPHAGE-DERIVED CHEMOKINE PRECURSOR.
 GN MDC OR A-152E5.1
 OS HOMO SAPIENS (HUMAN)
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
 OC CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RA GODISKA R., CHANTRY D., RAPORT C.J., SOZZANI S., ALLAVENA P.,
 RA MANTOVANI A., GRAY P.W.,
 RA J. EXP. MED. 185:0-0(0).
 RN [2]
 RN SEQUENCE FROM N.A.
 RP CHANG M.S., MCNINCH J., ELIAS III C., MANTHEY C.L., GROSSHANS D.,
 RA MENG T., BOONE T., ANDREW D.P.;
 RL SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [3]
 RN SEQUENCE FROM N.A.
 RA ADAMS M.D., LOFTUS B.J., ZHOU L., CROSBY M., FUHRMANN J., MASON T.M.,
 RA BRANDON R., KIM U.J., KERLAVAGE A.R., VENTER J.C.;
 RT "Homo sapiens Chromosome 16 BAC clone CIT987SK-A-152E5."
 RL SUBMITTED (JUN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; U83171; G1931581; -
 DR EMBL; U83239; G2062425; -
 DR EMBL; AC004382; G3252820; -
 DR PFAM; PF00048; I18; 1.
 KW SIGNAL.
 FT SIGNAL.
 FT CHAIN 1 24 POTENTIAL.
 FT CHAIN 25 93 MACROPHAGE-DERIVED CHEMOKINE.
 SQ SEQUENCE 93 AA; 10380 MW; 65EA63D2 CRC32;

Query Match 67.0%; Score 65; DB 4; Length 93;
 Best Local Similarity 63.6%; Pred. No. 1.09e-01;
 Matches 7; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 74 EICADPRVPWV 84
 :|||: ||
 QY 1 DICADPKKKWV 11

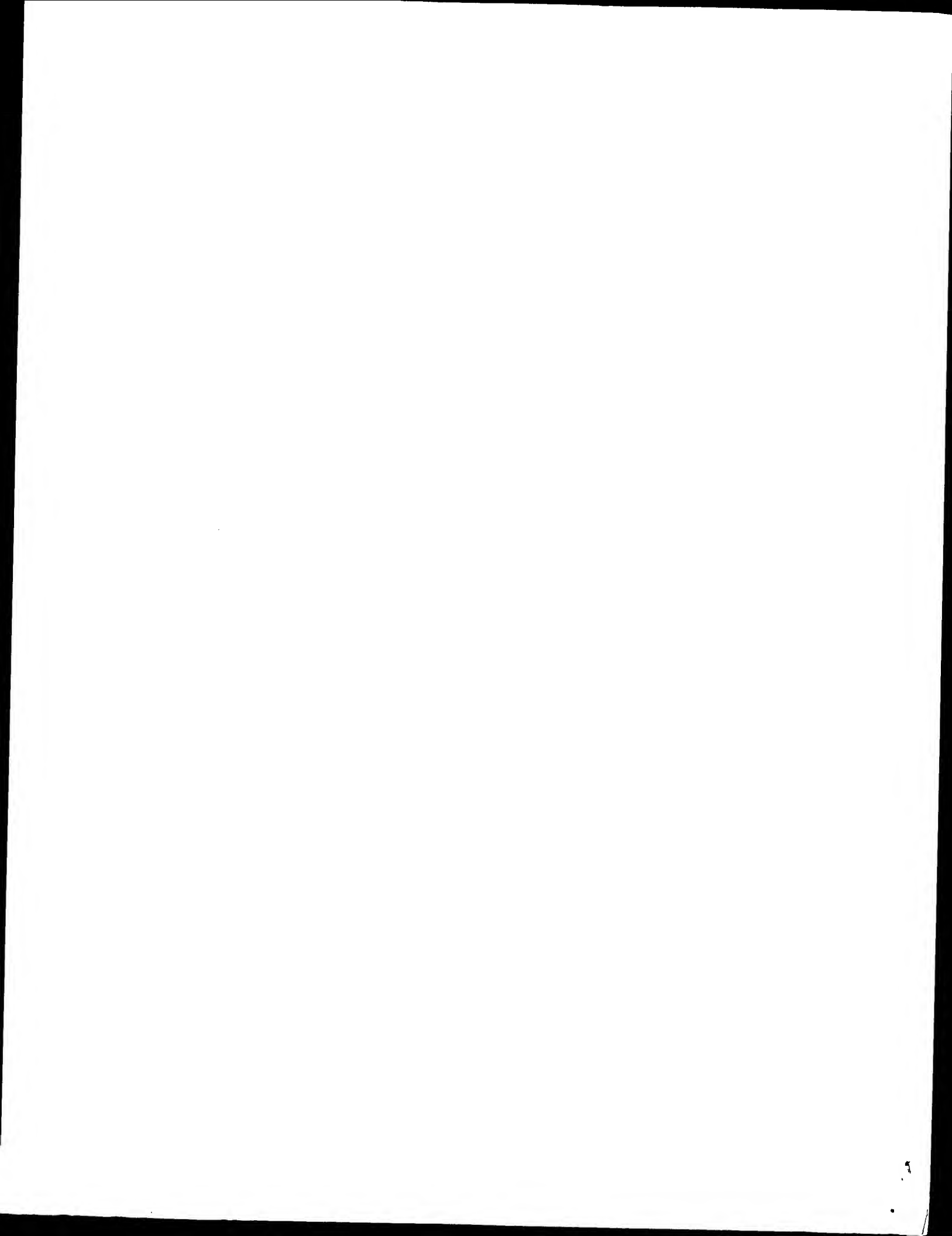
RESULT 15
 ID Q99664 PRELIMINARY; PRT; 95 AA.
 AC Q99664;
 DT 01-MAY-1997 (TREMREL. 03, CREATED)
 DT 01-MAY-1997 (TREMREL. 03, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
 DE CHEMOKINE EXODUS.
 OS HOMO SAPIENS (HUMAN)
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
 OC CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RP TISSUE-PANCREAS;
 RX MEDLINE; 97275143.
 RA HROMAS R., GRAY P.W., CHANTRY D., GODISKA R., KRATHWOHL M., FIFE K.,
 RA BELL G.I., TAKEDA J., ARONICA S., GORDON M., COOPER S.,
 RA BROXMEYER H.E., KLEMSZ M.J.;
 RA "Cloning and characterization of exodus, a novel beta-chemokine."
 RL BLOOD 89:3315-3322(1997).

DR EMBL; U64197; G1778717; -
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; I18; 1.
 SQ SEQUENCE 95 AA; 10691 MW; 1526B4C0 CRC32;

Query Match 67.0%; Score 65; DB 4; Length 95;
 Best Local Similarity 60.0%; Pred. No. 1.09e-01;
 Matches 6; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 72 VCANPKOTWV 81
 :|||: ||
 QY 2 ICADPKKKWV 11

Search completed: Fri Feb 4 17:58:25 2000
 Job time : 55 secs.



W P S R L H (TM)

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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 17:56:21 2000; MasPar time 3.58 Seconds
134.279 Million cell updates/sec

Tabular output not generated.

Title: >US-09-150-813-68
Description: (1-12) from US09150813.pap
Perfect Score: 97
Sequence: 1 DICADPKKKWVQ 12

Scoring table: PAM 150
Gap 15

Searched: 122810 seqs, 40068593 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: pir60
1:pir1 2:pir2 3:pir3 4:pir4

Statistics: Mean 24.895; Variance 36.317; scale 0.685

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	ID	Description	Pred. No.
1	94	96.9	97	2	JC4912 eotaxin precursor - h	7.77e-08
2	91	93.8	96	2	JC2478 eotaxin precursor - r	3.65e-07
3	91	93.8	96	2	I48099 eotaxin precursor - g	3.65e-07
4	89	91.8	99	2	A60299 monocyte chemoattract	1.01e-06
5	88	90.7	99	2	JC2136 monocyte chemoattract	1.68e-06
6	86	88.7	148	2	A30209 PDGF-inducible JE gly	4.62e-06
7	84	86.6	99	2	A39296 monocyte chemoattract	1.26e-05
8	84	86.6	99	2	JC2336 monocyte chemoattract	1.26e-05
9	84	86.6	125	2	I46857 monocyte chemoattract	3.39e-05
10	82	84.5	109	2	A54678 immediate-early serum	3.98e-05
11	82	84.5	148	2	S07723 monocyte chemoattract	3.98e-05
12	80	82.5	99	2	JC2417 monocyte chemoattract	9.08e-05
13	80	82.5	101	2	I48148 Neutrophil attractant	9.08e-05
14	80	82.5	120	2	I48147 monocyte chemoattract	9.08e-05
15	79	81.4	91	1	A46539 monocyte chemoattract	1.48e-04
16	79	81.4	95	2	JN0841 interleukin-8 - dog	1.48e-04
17	79	81.4	101	2	I46997 interleukin-8 - sheep	1.48e-04
18	79	81.4	101	2	S42496 interleukin-8 - sheep	1.48e-04
19	79	81.4	103	2	A44253 alveolar macrophage c	1.48e-04
20	79	81.4	103	2	A53096 interleukin-8 precurs	3.90e-04
21	77	79.4	92	2	I52322 macrophage inflammato	3.90e-04
22	77	79.4	99	2	JC5295 monocyte chemotactic	6.31e-04
23	76	78.4	101	2	I46871 interleukin-8 - rabbi	6.31e-04

24	73	75.3	91	1	A28815 monocyte chemoattract	2.63e-03
25	71	73.2	89	2	I53416 interleukin-8 homolog	6.70e-03
26	71	73.2	89	2	A53497 pre-B-cell growth-sti	6.70e-03
27	71	73.2	93	2	G01540 cytokine SDF-1-beta	6.70e-03
28	71	73.2	93	2	I81182 cytokine - mouse	6.70e-03
29	70	72.2	92	2	A32393 macrophage inflammato	1.07e-02
30	70	72.2	99	2	A37034 interleukin-8 precurs	4.21e-02
31	67	69.1	120	2	JE0177 lymphocyte and monocy	6.61e-02
32	66	68.0	50	2	C60407 macrophage inflammato	6.61e-02
33	66	68.0	92	1	A31767 macrophage inflammato	6.61e-02
34	66	68.0	92	2	A30574 LD78-beta protein pre	6.61e-02
35	66	68.0	93	2	B35673 lymphotactin precurs	6.61e-02
36	66	68.0	114	1	ETMSL immune activation gen	2.51e-01
37	63	64.9	92	2	I46730 Chitin synthetase I -	3.88e-01
38	62	63.9	760	2	S55520 monocyte cytokine FI	9.20e-01
39	60	61.9	97	2	A48093 transformation-induce	9.20e-01
40	60	61.9	103	2	A26736 RSV-induced protein -	9.20e-01
41	60	61.9	103	2	I50417 RCA3 protein - mouse	1.41e+00
42	59	60.8	114	2	S24236 lymphotactin precurs	1.41e+00
43	59	60.8	92	1	ETHUL hypotheetical protein	3.25e+00
44	57	58.8	397	2	S67061 SERA antigen/papain-1	3.25e+00
45	57	58.8	946	2	G71617	

ALIGNMENTS

RESULT	1
ENTRY	JC4912 #type complete
TITLE	eotaxin precursor - human
ORGANISM	#formal_name Homo sapiens #common_name man
DATE	01-Nov-1996 #sequence_revision 01-Nov-1996 #text_change 13-Nov-1998
ACCESSIONS	JC4912
REFERENCE	JC4912
#authors	Bartels, J.; Schlueter, C.; Richter, E.; NOSO, N.; Kulke, R.; Christoffers, E.; Schroeder, J.M.
#journal	Biochem. Biophys. Res. Commun. (1996) 225:1045-1051
#title	Human dermal fibroblasts express eotaxin: Molecular cloning, mRNA expression, and identification of eotaxin sequence variants.
#accession	JC4912
##status	preliminary
##molecule_type	mRNA
##residues	1-97 #label BAR
##cross-references	EMBL:Z75668; NID:g1531982; PID:e251275; PID:g1531983
##experimental_source	dermal fibroblast
COMMENT	This protein has eosinophil specific chemotactic activity.
CLASSIFICATION	#superfamily macrophage inflammatory protein fibroblast
KEYWORDS	
FEATURE	
1-18	#domain signal sequence #status predicted #label SIG\
19-97	#product eotaxin #status predicted #label MAT
SUMMARY	#length 97 #molecular-weight 10790 #checksum 448
Query Match	96.9%; Score 94; DB 2; Length 97;
Best Local Similarity	91.7%; Pred. No. 7.77e-08;
Matches	11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db	71 DICADPKKKWVQ 82
Qy	1 DICADPKKKWVQ 12
RESULT	2
ENTRY	JC2478 #type complete
TITLE	eotaxin precursor - rat
ORGANISM	#formal_name Rattus norvegicus #common_name Norway rat
DATE	21-Feb-1995 #sequence_revision 05-Apr-1995 #text_change 17-Mar-1999
ACCESSIONS	JC2478
REFERENCE	JC2478
#authors	Jose, P.J.; Adcock, I.M.; Griffiths-Johnson, D.A.; Berkman, N.; Wells, T.N.C.; Williams, T.J.; Power, C.A.

```

#journal Biochem. Biophys. Res. Commun. (1994) 205:788-794
#title Eotaxin: Cloning of an eosinophil chemoattractant cytokine
#cross-references EMBL:X77603; NID:G602551; PID:G602552
#accession J02478
#molecule_type mRNA
#residues 1-96 #label JOS
#cross-references EMBL:X77603; NID:G602551; PID:G602552
COMMENT This protein is identified as a potent eosinophil chemoattractant.
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS glycoprotein
FEATURE
1-23 #domain signal sequence #status predicted #label SIG\
24-96 #product eotaxin #status predicted #label MAT\
93 #binding_site carbohydrate (Thr) (covalent) #status
Predicted
SUMMARY
#length 96 #molecular_weight 10695 #checksum 7329
Query Match 93.8%; Score 91; DB 2; Length 96;
Best Local Similarity 100.0%; Pred. No. 3.65e-07;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Db 71 ICADPKKKWQ 81
QY 2 ICADPKKKWQ 12
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RESULT 3
ENTRY #type complete
TITLE eotaxin precursor - guinea pig
ORGANISM #formal_name Cavia porcellus #common_name guinea pig
DATE 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change
09-May-1997
ACCESSIONS 148099
REFERENCE 148099
#authors Rothenberg, M.E.; Luster, A.D.; Lilly, C.M.; Drazen, J.M.;
Leder, P.
#journal J. Exp. Med. (1995) 181:1211-1216
#title Constitutive and allergen-induced expression of eotaxin mRNA
in the guinea pig lung.
#cross-references MUID:95173589
#accession 148099
#status Preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-96 #label RES
#cross-references EMBL:U18941; NID:G687655; PID:G687656
CLASSIFICATION #superfamily macrophage inflammatory protein
SUMMARY
#length 96 #molecular_weight 10753 #checksum 7236
Query Match 93.8%; Score 91; DB 2; Length 96;
Best Local Similarity 100.0%; Pred. No. 3.65e-07;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Db 71 ICADPKKKWQ 81
QY 2 ICADPKKKWQ 12
|||||
RESULT 4
ENTRY #type complete
TITLE monocyte chemoattractant protein 1 precursor - human
ALTERNATE_NAMES GDCF-1; glioma-derived monocyte chemoattractant factor 1; MCAF;
MCP-1; monocyte chemoattractant factor 1; monocyte secretory
protein; tumor-derived chemoattractant factor
CONTAINS glioma-derived chemoattractant factor 2 (GDCF-2)
ORGANISM #formal_name Homo sapiens #common_name man
DATE 20-Feb-1993 #sequence_revision 20-Feb-1993 #text_change
20-Mar-1998
ACCESSIONS A35474; A33476; S03339; I51841; A60299; A32300; A32396;
A34561; I57488; JC1096
REFERENCE A35474
#authors Shyy, Y.J.; Li, Y.S.; Kolattukudy, P.E.

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#journal Biochem. Biophys. Res. Commun. (1990) 169:346-351
#title Structure of human monocyte chemoattractant protein gene and its
regulation by TPA.
#cross-references MUID:90290466
#accession A35474
#molecule_type DNA
#residues 1-99 #label SHY
#cross-references GB:M37719; NID:G187447; PID:G487124
REFERENCE A33476
#authors Rollins, B.J.; Stier, P.; Ernst, T.; Wong, G.G.
#journal Mol. Cell. Biol. (1989) 9:4687-4695
#title The human homolog of the JE gene encodes a monocyte secretory
protein.
#cross-references MUID:90097880
#accession A33476
#molecule_type mRNA
#residues 1-99 #label ROL
#cross-references GB:M30816; GB:M31625; GB:M31626; NID:G188701;
PID:G386961
REFERENCE S03339
#authors Yoshimura, T.; Yuhki, N.; Moore, S.K.; Appella, E.; Lerman,
M.I.; Leonard, E.J.
#journal FEBS Lett. (1989) 244:487-493
#title Human monocyte chemoattractant protein-1 (MCP-1). Full-length
cDNA cloning, expression in mitogen-stimulated blood
mononuclear leukocytes, and sequence similarity to mouse
competence gene JE.
#cross-references MUID:89153605
#accession S03339
#status not compared with conceptual translation
#molecule_type mRNA
#residues 1-99 #label YOS
#cross-references GB:X14768; NID:G34513; PID:G34514
#experimental_source glioma cell line U-105MG
REFERENCE I51841
#authors Yoshimura, T.; Leonard, E.J.
#journal Adv. Exp. Med. Biol. (1991) 305:47-56
#title Human monocyte chemoattractant protein-1 (MCP-1).
#cross-references MUID:92095166
#accession I51841
#status Preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-99 #label Y02
#cross-references GB:S71513; NID:G240867; PID:G240868
REFERENCE A60299
#authors Bottazzi, B.; Colotta, F.; Sica, A.; Nobili, N.; Mantovani,
A.; J. Cancer (1990) 45:795-797
#journal A chemoattractant expressed in human sarcoma cells
#title (tumor-derived chemoattractant factor, TDCF) is identical to
monocyte chemoattractant protein-1/monocyte chemoattractant and
activating factor (MCP-1/MCAF).
#accession A60299
#status not compared with conceptual translation
#molecule_type mRNA
#residues 1-99 #label BOT
REFERENCE A32300
#authors Furutani, Y.; Nomura, H.; Notake, M.; Oyama, Y.; Fukui, T.;
Yamada, M.; Larsen, C.G.; Oppenheim, J.J.; Matsushima, K.
#journal Biochem. Biophys. Res. Commun. (1989) 159:249-255
#title Cloning and sequencing of the cDNA for human monocyte
chemoattractant and activating factor (MCAF).
#cross-references MUID:89165862
#accession A32300
#status not compared with conceptual translation
#molecule_type mRNA
#residues 1-99 #label FUR
#cross-references GB:M24545; NID:G187434; PID:G307163
REFERENCE A32396
#authors Robinson, E.A.; Yoshimura, T.; Leonard, E.J.; Tanaka, S.;
Griffin, P.R.; Shabanowitz, J.; Hunt, D.F.; Appella, E.
#journal Proc. Natl. Acad. Sci. U.S.A. (1989) 86:1850-1854
#title Complete amino acid sequence of a human monocyte

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chemoattractant, a putative mediator of cellular immune
reactions.
#cross-references MUID:89184525
#accession A32396
#molecule_type protein
#residues 1-25-99 #label ROB
REFERENCE
#authors Decock, B.; Conings, R.; Lenaerts, J.P.; Billiau, A.; Van
Damme, J.
#journal Biochem. Biophys. Res. Commun. (1990) 167:904-909
#title Identification of the monocyte chemoattractant protein from human
osteosarcoma cells and monocytes: detection of a novel
N-terminally processed form.
#cross-references MUID:90211336
#accession A34561
#molecule_type protein
#residues 29-33, XX', 36-52;82-92 #label DEC
REFERENCE
#authors Li, Y.S.; Shyy, Y.J.; Wright, J.G.; Valente, A.J.; Cornhill,
J.F.; Kolattukudy, P.E.
#journal Mol. Cell. Biochem. (1993) 126:61-68
#title The expression of monocyte chemoattractant protein (MCP-1) in
human vascular endothelium in vitro and in vivo.
#cross-references MUID:94150478
#accession I57488
#status translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-99 #label LIV
#cross-references GB:S69738; NID:g545464; PID:g545465
REFERENCE
#authors Ye, Q.N.; Su, G.F.; Yuan, Y.; Huang, C.F.
#journal Chinese J. Microbiol. Immunol. (1994) 14:29-32
#title The PCR, cloning and sequencing of human monocyte
chemoattractant protein-1 (MCP-1) gene.
#accession JCI096
#molecule_type mRNA
#residues 24-28, 'Q', 30-99 #label YEO
GENETICS
#gene GDB:SCYA2
#map_position 17q11.2-17q12
#classification #superfamily macrophage inflammatory protein
cytokine; glycoprotein; inflammation; pyroglutamic acid
KEYWORDS
#domain signal sequence #status predicted #label SIG\
#product monocyte chemoattractant protein 1 #status
experimental #label MAR\
#product monocyte chemoattractant protein 1, short form
#status experimental #label MAR2\
#modified site pyrrolidone carboxylic acid (Gln) (in
mature form) #status experimental\
#binding_site carbohydrate (Asn) (covalent) #status
predicted
#length 99 #molecular-weight 11025 #checksum 7984
SUMMARY
Query Match 91.8%; Score 89; DB 2; Length 99;
Best Local Similarity 83.3%; Pred. No. 1.01e-06;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
Db 73 EICADPKKQWVQ 84
:|||||
QY 1 DICADPKKQWVQ 12
RESULT 5
ENTRY #type complete
#accession JC2136
#molecule_type DNA
#residues 1-148 #label KA2
#cross-references GB:J04467; NID:g193488; PID:g387169
GENETICS
#gene JE
#introns 26/1; 65/2
#classification #superfamily macrophage inflammatory protein
cytokine; glycoprotein
KEYWORDS
#binding_site carbohydrate (Asn) (covalent) #status
predicted
126

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Scheit, K.H.
Biochem. Biophys. Res. Commun. (1994) 199:962-968
Porcine luteal cells express monocyte chemoattractant
protein-1 (MCP-1): Analysis by polymerase chain reaction
and cDNA cloning.
#cross-references MUID:94183284
#accession JC2136
#molecule_type mRNA
#residues 1-99 #label HOS
REFERENCE
#authors Zach, O.
#submission submitted to the EMBL Data Library, July 1994
#accession S57498
#status preliminary
#molecule_type mRNA
#residues 1-99 #label ZAC
#cross-references EMBL:X79416; NID:g872312; PID:g872313
#classification #superfamily macrophage inflammatory protein
glycoprotein
KEYWORDS
#domain signal sequence #status predicted #label SIG\
#product monocyte chemoattractant protein-1 #status
predicted #label MAR\
#binding_site carbohydrate (Asn) (covalent) #status
predicted
#length 99 #molecular-weight 10976 #checksum 9768
SUMMARY
Query Match 90.7%; Score 88; DB 2; Length 99;
Best Local Similarity 75.0%; Pred. No. 1.68e-06;
Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
Db 73 EICADPKKQWVQ 84
:|||||
QY 1 DICADPKKQWVQ 12
RESULT 6
ENTRY #type complete
#accession A30209
#molecule_type DNA
#residues 1-148 #label ROL
#cross-references GB:M19681; NID:g193486; PID:g387168; GB:M19682
#classification #formal_name Mus musculus #common_name house mouse
01-Dec-1989 #sequence_revision 01-Dec-1989 #text_change
01-May-1998
#accessions A30209; A44771; A30861
#reference A30209
#authors Rollins, B.J.; Morrison, E.D.; Stiles, C.D.
#journal Proc. Natl. Acad. Sci. U.S.A. (1988) 85:3738-3742
#title Cloning and expression of JE, a gene inducible by
platelet-derived growth factor and whose product has
cytokine-like properties.
#cross-references MUID:88234501
#accession A30209
#molecule_type DNA
#residues 1-148 #label ROL
#cross-references GB:M19681; NID:g193486; PID:g387168; GB:M19682
#reference A44771
#authors Kawahara, R.S.; Deuel, T.F.
#journal J. Biol. Chem. (1989) 264:679-682
#title Platelet-derived growth factor-inducible gene JE is a member
of a family of small inducible genes related to platelet
factor 4
#cross-references MUID:89093129
#accession A44771
#molecule_type DNA; mRNA
#residues 1-148 #label KA2
#cross-references GB:J04467; NID:g193488; PID:g387169
GENETICS
#gene JE
#introns 26/1; 65/2
#classification #superfamily macrophage inflammatory protein
cytokine; glycoprotein
KEYWORDS
#binding_site carbohydrate (Asn) (covalent) #status
predicted
126

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SUMMARY          #length 148 #molecular-weight 16326 #checksum 5278
Query Match      88.7%; Score 86; DB 2; Length 148;
Best Local Similarity 75.0%; Pred. No. 4.62e-06;
Matches          9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 73 EVCADPKKQWVQ 84
   :||||| |||
QY 1 DICADPKKKWVQ 12

RESULT 7
ENTRY  A39296 #type complete
TITLE  monocyte chemoattractant protein 1 precursor - bovine
ALTERNATE_NAMES monocyte chemotactic factor 1; seminal plasma protein p6
ORGANISM #formal_name Bos primigenius taurus #common_name cattle
DATE 03-Aug-1992 #sequence_revision 03-Aug-1992 #text_change
31-Oct-1997
ACCESSIONS A39296; B39296
REFERENCE A39296
#authors Wempe, F.; Henschen, A.; Scheit, K.H.
#journal DNA Cell Biol. (1991) 10:671-679
#title Gene expression and cDNA cloning identified a major basic
protein constituent of bovine seminal plasma as bovine
monocyte-chemoattractant protein-1 (MCP-1).
#cross-references MUID:92096117
#accession A39296
#molecule_type mRNA
#residues 1-99 ##label WEM
#cross-references GB:M84602; GB:M85264; NID:g163394; PID:g163395
#accession B39296
#molecule_type protein
#residues 50-68,'X','70-74','X','76 ##label WE2
#experimental_source seminal vesicle
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS glycoprotein
FEATURE 1-23
24-99
94 #domain signal sequence #status predicted #label SIG\
#product monocyte chemoattractant protein 1 #status
#predicted #label MAT\
#binding_site carbohydrate (Asn) (covalent) #status
predicted
SUMMARY #length 99 #molecular-weight 11114 #checksum 9401
Query Match      86.6%; Score 84; DB 2; Length 99;
Best Local Similarity 75.0%; Pred. No. 1.26e-05;
Matches          9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 73 ELCADPKQKWVQ 84
   :||||| |||
QY 1 DICADPKKKWVQ 12

RESULT 8
ENTRY  JC2336 #type complete
TITLE  monocyte chemoattractant protein-1 - bovine
ORGANISM #formal_name Bos primigenius indicus #common_name zebu cattle
DATE 20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change
03-May-1996
ACCESSIONS JC2336
REFERENCE JC2336
#authors Wempe, F.; Kuhlmann, J.K.; Scheit, K.H.
#journal Biochem. Biophys. Res. Commun. (1994) 202:1272-1279
#title Characterization of the bovine monocyte chemoattractant
protein-1 gene.
#cross-references MUID:94338337
#accession JC2336
#molecule_type protein
#residues 1-99 ##label WEM
GENETICS MCP-1
#gene 26/1; 65/2
CLASSIFICATION #superfamily macrophage inflammatory protein

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SUMMARY          #length 99 #molecular-weight 11114 #checksum 9401
Query Match      86.6%; Score 84; DB 2; Length 99;
Best Local Similarity 75.0%; Pred. No. 1.26e-05;
Matches          9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 73 ELCADPKQKWVQ 84
   :||||| |||
QY 1 DICADPKKKWVQ 12

RESULT 9
ENTRY  I46857 #type complete
TITLE  monocyte chemoattractant protein-1 - rabbit
ORGANISM #formal_name Oryctolagus cuniculus #common_name domestic
rabbit
DATE 14-Feb-1997 #sequence_revision 14-Feb-1997 #text_change
09-May-1997
ACCESSIONS I46857
REFERENCE I46857
#authors Yoshimura, T.; Yuhki, N.
#journal J. Immunol. (1991) 146:3483-3488
#title Neutrophil attractant/activation protein-1 and monocyte
chemoattractant protein-1 in rabbit: cDNA cloning and their
expression in spleen cells.
#cross-references MUID:91225489
#accession I46857
#status preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-125 ##label YOS
#cross-references GB:M57440; NID:g165469; PID:g165470
CLASSIFICATION #superfamily macrophage inflammatory protein
SUMMARY #length 125 #molecular-weight 13776 #checksum 4498
Query Match      86.6%; Score 84; DB 2; Length 125;
Best Local Similarity 90.9%; Pred. No. 1.26e-05;
Matches          10; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 74 ICADPKQKWVQ 84
   :||||| |||
QY 2 ICADPKKKWVQ 12

RESULT 10
ENTRY  A54678 #type complete
TITLE  monocyte chemotactic protein 3 precursor - human
ALTERNATE_NAMES monocyte chemoattractant protein MCP-3
ORGANISM #formal_name Homo sapiens #common_name man
DATE 28-Oct-1994 #sequence_revision 28-Oct-1994 #text_change
17-Mar-1999
ACCESSIONS A54678; JC1478; S32222
REFERENCE A54678
#authors Odenakker, G.; Fiten, P.; Nys, G.; Froyen, G.; Van Roy, N.;
Speleman, P.; Laureys, G.; Van Damme, J.
#journal Genomics (1994) 21:403-408
#title The human MCP-3 gene (SCYA7): cloning, sequence analysis, and
assignment to the C-C chemokine gene cluster on chromosome
17q11.2-q12.
#cross-references MUID:94375065
#accession A54678
#molecule_type DNA
#residues 1-109 ##label OPD
#cross-references GB:X72309
REFERENCE JC1478
#authors Odenakker, G.; Froyen, G.; Fiten, P.; Proost, P.; Van Damme,
J.
#journal Biochem. Biophys. Res. Commun. (1993) 191:535-542
#title Human monocyte chemotactic protein-3 (MCP-3): Molecular
cloning of the cDNA and comparison with other chemokines.
#cross-references MUID:93213290
#accession JC1478
#molecule_type mRNA
#residues 1-109 ##label OP2

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REFERENCE
#authors
#domain signal sequence #status predicted #label SIG\
#product immediate-early serum-responsive protein JE
#status predicted #label MAT
#length 148 #molecular-weight 16460 #checksum 4876
SUMMARY
Query Match 84.5%; Score 82; DB 2; Length 148;
Best Local Similarity 75.0%; Pred. No. 3.39e-05;
Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 73 EICADPNKEWVQ 84
QY 1 DICADPKKKWVQ 12

RESULT 12
ENTRY JC2417 #type complete
TITLE monocyte chemoattractant protein-2 precursor - pig
ALTERNATE_NAMES #formal_name Sus scrofa domestica #common_name domestic pig
ORGANISM 24-Feb-1995 #sequence_revision 24-Feb-1995 #text_change
DATE 17-Mar-1999
ACCESSIONS JC2417
REFERENCE Hosang, K.; Knoke, I.; Klaudiny, J.; Wempe, F.; Wuttke, W.;
#authors Scheidt, K.H.
#journal Biochem. Biophys. Res. Commun. (1994) 205:148-153
#title Porcine luteal cells express monocyte chemoattractant
protein-2 (MCP-2): Analysis by cDNA cloning and northern
analysis.
#cross-references MUID:95091716
#accession JC2417
#molecule_type mRNA
#residues 1-99 #label HOS
#experimental_source corpus luteum
CLASSIFICATION #superfamily macrophage inflammatory protein
FEATURE
1-23 #domain signal sequence #status predicted #label SIG\
24-99 #product monocyte chemoattractant protein-2 #status
predicted #label MAT
SUMMARY #length 99 #molecular-weight 10903 #checksum 7556
Query Match 82.5%; Score 80; DB 2; Length 99;
Best Local Similarity 66.7%; Pred. No. 9.08e-05;
Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 73 EVCADPQKKWVQ 84
QY 1 DICADPKKKWVQ 12

RESULT 13
ENTRY I48148 #type complete
TITLE Neutrophil attractant protein-1 - guinea pig
ALTERNATE_NAMES #formal_name Cavia porcellus #common_name guinea pig
ORGANISM 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change
DATE 23-Feb-1997
ACCESSIONS I48148
REFERENCE Yoshimura, T.; Johnson, D.G.
#authors J. Immunol. (1993) 151:6225-6236
#journal CDNA cloning and expression of guinea pig neutrophil
#title attractant protein-1 (NAP-1): NAP-1 is highly conserved in
guinea pig.
#cross-references MUID:94065176
#accession I48148
#status preliminary; translated from GB/EMBL/DBDJ
#molecule_type DNA
#residues 1-101 #label RES
#cross-references GB:L04986; NID:g459764; PID:g459765
GENETICS
#gene NAP-1
#superfamily beta-thromboglobulin
CLASSIFICATION #length 101 #molecular-weight 11414 #checksum 2363
SUMMARY

```

```

S32222
#authors Minty, A.; Chalon, P.; Guillemot, J.C.; Kaghad, M.; Liaunun,
P.; Magazin, M.; Miloux, B.; Minty, C.; Ramond, P.; Vita,
N.; Lupker, J.; Shire, D.; Ferrara, P.; Caput, D.
#submission submitted to the EMBL Data Library, March 1993
#description Molecular cloning of MCP-3: a human monocyte-derived monocyte
chemoattractant protein.
#accession S32222
#molecule_type mRNA
#residues 1-109 #label MIN
#cross-references EMBL:X71087; NID:g288396; PID:g288397.
COMMENT This protein induces proteinase secretion and chemotaxis by
macrophages and monocytes.

GENETICS
#gene GDB:SCYA7; SCYA6; MCP-3
#cross-references GDB:138473; OMIM:158106
#map_position 17q11-17q12
#introns 36/1; 75/2
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS cytokine; glycoprotein; inflammation
FEATURE
1-33 #domain signal sequence #status predicted #label SIG\
34-109 #product monocyte chemotactic protein 3 #status
predicted #label MAT
39 #binding_site carbohydrate (Asn) (covalent) #status
predicted
SUMMARY #length 109 #molecular-weight 12356 #checksum 1535
Query Match 84.5%; Score 82; DB 2; Length 109;
Best Local Similarity 75.0%; Pred. No. 3.39e-05;
Matches 9; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Db 83 EICADPTQKWVQ 94
QY 1 DICADPKKKWVQ 12

RESULT 11
ENTRY S07723 #type complete
TITLE immediate-early serum-responsive protein JE precursor - rat
ALTERNATE_NAMES monocyte chemoattractant protein-1
ORGANISM #formal_name Rattus norvegicus #common_name Norway rat
DATE 29-Jan-1993 #sequence_revision 29-Jan-1993 #text_change
13-Nov-1998
ACCESSIONS S07723; JN0128
REFERENCE Timmers, H.T.M.; Pronk, G.J.; Bos, J.L.; van der Eb, A.J.
#authors Nucleic Acids Res. (1990) 18:23-34
#journal Analysis of the rat JE gene promoter identifies an AP-1
#title binding site essential for basal expression but not for TPA
induction.
#cross-references MUID:90174947
#accession S07723
#molecule_type DNA
#residues 1-148 #label TIM
#cross-references EMBL:X17053; NID:g55530; PID:g55531
REFERENCE JN0128
#authors Yoshimura, T.; Takeya, M.; Takahashi, K.
#journal Biochem. Biophys. Res. Commun. (1991) 174:504-509
#title Molecular cloning of rat monocyte chemoattractant protein-1
(MCP-1) and its expression in rat spleen cells and tumor
cell lines.
#cross-references MUID:91128376
#accession JN0128
#molecule_type mRNA
#residues 1-148 #label YOS
#cross-references GB:M57441; NID:g205333; PID:g205334
#experimental_source spleen cells
#note the authors translated the codon GAA for residue 62 as
Lys and GCT for residue 63 as Leu

GENETICS
#introns 26/1; 65/2
CLASSIFICATION #superfamily macrophage inflammatory protein
SUMMARY

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Query Match      82.5%; Score 80; DB 2; Length 101;
Best Local Similarity 75.0%; Pred. No. 9.08e-05;
Matches          9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 75 QLCADPKKKWQ 86
   :| | | | | | | |
QY 1 DICADPKKKWQ 12

RESULT 14
ENTRY   #type complete
TITLE   monocyte chemoattractant protein-1 - guinea pig
ORGANISM #formal_name Cavia porcellus #common_name guinea pig
DATE     02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change
09-May-1997

ACCESSIONS I48147
REFERENCE   I48147
#authors   Yoshimura, T.
#journal   J. Immunol. (1993) 150:5025-5032
#title     CDNA cloning of guinea pig monocyte chemoattractant protein-1
           and expression of the recombinant protein.
#cross-references MUID:93267104
#accession  I48147
#status     preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues   1-120 #label RES
#cross-references GB:L04985; NID:g349820; PID:g349821

GENETICS MCP-1
#gene
#classification #superfamily macrophage inflammatory protein
SUMMARY #length 120 #molecular-weight 13741 #checksum 9252

Query Match      82.5%; Score 80; DB 2; Length 120;
Best Local Similarity 66.7%; Pred. No. 9.08e-05;
Matches          8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 71 EVCADPTQKKWQ 82
   :| | | | | | | |
QY 1 DICADPKKKWQ 12

RESULT 15
ENTRY   #type complete
TITLE   monocyte chemoattractant cytokine RANTES precursor - mouse
ALTERNATE_NAMES Murantes
ORGANISM #formal_name Mus musculus #common_name house mouse
DATE     18-Jun-1993 #sequence_revision 16-Aug-1996 #text_change
22-Jan-1999

ACCESSIONS I48875; A46539; I48654; I56970
REFERENCE   I48875
#authors   Danoff, T.M.; Lallely, P.A.; Chang, Y.S.; Heeger, P.S.;
           Neilson, E.G.
#journal   J. Immunol. (1994) 152:1182-1189
#title     Cloning, genomic organization, and chromosomal localization
           of the Sca5 gene encoding the murine chemokine RANTES.
#cross-references MUID:94132613
#accession  I48875
#status     preliminary; translated from GB/EMBL/DBJ
#molecule_type DNA
#residues     1-91 #label DAN
#cross-references EMBL:U02298; NID:g460090; PID:g460091

REFERENCE A46539
#authors   Schall, T.J.; Simpson, N.J.; Mak, J.Y.
#journal   Eur. J. Immunol. (1992) 22:1477-1481
#title     Molecular cloning and expression of the murine RANTES
           cytokine: structural and functional conservation between
           mouse and man.
#cross-references MUID:92289805
#accession  A46539
#molecule_type mRNA
#residues     1-18, 'A', 20-91 #label SCH
#cross-references GB:S37648; NID:g250207; PID:g250208

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#experimental_source macrophage cell line PUS-1.8
#note      sequence extracted from NCBI backbone (NCBIN:106768,
           NCBI:106770)

REFERENCE I48654
#authors   Shin, H.S.; Drysdale, B.E.; Shin, M.L.; Noble, P.W.; Fisher,
           S.N.; Paznekas, W.A.
#journal   Mol. Cell. Biol. (1994) 14:2914-2925
#title     Definition of a lipopolysaccharide-responsive element in the
           5'-flanking regions of Murantes and crg-2.
#cross-references MUID:94217689
#accession  I48654
#status     translation not shown; translated from GB/EMBL/DBJ
#molecule_type DNA
#residues     1-91 #label SHI
#cross-references EMBL:X70675; NID:g475205; PID:g475206
I56970

REFERENCE I56970
#authors   Neilson, E.G.; Krensky, A.
#journal   Kidney Int. (1992) 41:220-225
#title     Isolation and characterization of cDNA from renal tubular
           epithelium encoding murine Rantes: A small intercrine from
           the Scy superfamily.
#cross-references MUID:92277990
#accession  I56970
#status     translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues     1-40, 'E', 42-91 #label NEI
#cross-references GB:M77747; NID:g200649; PID:g200650

COMMENT This chemoattractant for monocytes but not neutrophils is an
         immediate-early response protein to LPS stimulation.

GENETICS #introns 26/1; 63/2
#classification #superfamily macrophage inflammatory protein; inflammation
KEYWORDS chemotaxis; cytokine; immediate-early protein; inflammation
FEATURE   #domain signal sequence #status predicted #label SIG\
           #product monocyte chemoattractant cytokine RANTES
           #status predicted #label MAT
           #length 91 #molecular-weight 10071 #checksum 3010
           1-23
           24-91

SUMMARY Query Match      81.4%; Score 79; DB 1; Length 91;
         Best Local Similarity 66.7%; Pred. No. 1.48e-04;
         Matches          8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
         :| | | | | | |
         QY 1 DICADPKKKWQ 12

Search completed: Fri Feb 4 17:56:48 2000
Job time : 27 secs.

```

W P S R L H (TM)

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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm
Run on: Fri Feb 4 18:09:53 2000; MasPar time 5.11 Seconds
128.201 Million cell updates/sec
Tabular output not generated.

Title: >US-09-150-813-73
Description: (1-12) from US09150813.pep
Perfect Score: 86
Sequence: 1 KACLNPAASPMVK 12

Scoring table: PAM 150
Gap 15

Searched: 179066 seqs, 54579741 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: sprenbl9
1:sp-archaea 2:sp-bacteria 3:sp-fungi 4:sp-human
5:sp-invertebrate 6:sp-mammal 7:sp-mhc 8:sp-organelle
9:sp-phage 10:sp-plant 11:sp-rodent 12:sp-unclassified
13:sp-vertebrate 14:sp-virus

Statistics: Mean 23.076; Variance 25.745; scale 0.896

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description	Pred. No.
1	77	89.5	66	6	PERMEABILITY FACTOR 2	4.43e-07
2	73	84.9	103	6	GRO.	5.71e-06
3	71	82.6	59	6	MELANOMA GROWTH STIMUL	2.01e-05
4	60	69.8	377	5	ALPHA-TUBULIN (FRAGMENT)	1.52e-02
5	58	67.4	331	5	ALPHA-TUBULIN ISOTYPE	4.76e-02
6	58	67.4	359	5	ALPHA-4-TUBULIN (FRAGM	4.76e-02
7	58	67.4	449	4	ALPHA-TUBULIN (ALPHA-T	4.76e-02
8	58	67.4	449	13	ALPHA-TUBULIN.	4.76e-02
9	58	67.4	450	5	TUBULIN ALPHA CHAIN.	4.76e-02
10	58	67.4	451	5	ALPHA-1 TUBULIN.	4.76e-02
11	58	67.4	451	5	ALPHA-2 TUBULIN.	4.76e-02
12	58	67.4	451	5	ALPHA-2 TUBULIN.	4.76e-02
13	58	67.4	451	5	ALPHA-2 TUBULIN.	4.76e-02
14	58	67.4	451	5	ALPHA-1 TUBULIN.	4.76e-02
15	58	67.4	451	5	ALPHA-TUBULIN.	4.76e-02
16	58	67.4	614	13	SUP35 (FRAGMENT).	4.76e-02
17	57	66.3	443	5	ALPHA-3-TUBULIN (FRAGM	8.36e-02
18	56	65.1	449	5	TBA-2 PROTEIN.	1.46e-01
19	56	65.1	449	5	ALPHA-1 TUBULIN.	1.46e-01
20	56	65.1	852	10	1,4-ALPHA-GLUCAN BRANC	1.46e-01

21	55	64.0	381	5	P92124	ALPHA-TUBULIN (FRAGMEN	2.54e-01
22	54	62.8	447	5	Q19490	F16D3.1 PROTEIN.	4.38e-01
23	53	61.6	245	6	Q77560	PHOSDUCIN.	7.52e-01
24	53	61.6	380	5	P92120	ALPHA-TUBULIN (FRAGMEN	7.52e-01
25	52	60.5	444	5	Q18154	T28D6.2 PROTEIN.	7.52e-01
26	52	60.5	419	2	P72650	ZEAAXANTHIN GLUCOSYL TR	1.28e+00
27	51	59.3	115	2	O83165	HYPOTHETICAL 11.8 KD P	2.17e+00
28	51	59.3	134	2	O32305	YIRG (FRAGMENT).	2.17e+00
29	51	59.3	246	11	O63420	ROD PHOTORECEPTOR 1 (P	2.17e+00
30	51	59.3	268	10	O65707	HYPOTHETICAL 30.0 KD P	2.17e+00
31	51	59.3	1296	4	Q13463	PATCHED HOMOLOG (PTC).	2.17e+00
32	51	59.3	1434	11	Q61115	PATCHED PROTEIN.	2.17e+00
33	51	59.3	1442	13	Q90693	PATCHED PROTEIN.	2.17e+00
34	51	59.3	1447	4	Q13635	PATCHED.	2.17e+00
35	50	58.1	104	13	Q73912	K60 PROTEIN PRECURSOR.	3.66e+00
36	50	58.1	380	10	Q43568	DNA-BINDING PROTEIN (F	3.66e+00
37	50	58.1	501	2	Q46447	UNKNOWN FUNCTION.	3.66e+00
38	50	58.1	535	4	Q14544	CISA.	3.66e+00
39	50	58.1	546	10	Q40451	DNA-BINDING PROTEIN.	3.66e+00
40	50	58.1	608	2	O84657	HYPOTHETICAL 70.7 KD P	3.66e+00
41	50	58.1	15281	3	Q09164	CYCLOSPORIN SYNTHETASE	6.11e+00
42	49	57.0	257	13	Q42335	PTC1 (FRAGMENT).	6.11e+00
43	49	57.0	522	14	O91334	GLYCOPROTEIN E.	6.11e+00
44	49	57.0	611	14	Q65855	HELICASE.	6.11e+00
45	49	57.0	2453	11	Q60974	RETINOID X RECEPTOR IN	6.11e+00

ALIGNMENTS

RESULT	1	PRELIMINARY;	PRT;	66 AA.
ID	Q28724			
AC	Q28724			
DT	01-NOV-1996	(TREMBLREL. 01, CREATED)		
DT	01-NOV-1996	(TREMBLREL. 01, LAST SEQUENCE UPDATE)		
DT	01-NOV-1998	(TREMBLREL. 08, LAST ANNOTATION UPDATE)		
DE	PERMEABILITY FACTOR 2 (FRAGMENT).			
DE	RP22.			
GN	ORYCTOLAGUS CUNICULUS (RABBIT).			
OS	ORYCTOLAGUS CUNICULUS (RABBIT).			
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;			
OC	LAGOMORPHA; LEPORIDAE; ORYCTOLAGUS.			
RC	SEQUENCE FROM N.A.			
RC	STRAIN-NEW ZEALAND WHITE;			
RX	MEDLINE; 95129899			
RA	JOHNSON M.C., GOODMAN R.B. II, KAJIKAWA O., WONG V.A., MONGOVIN S.M.,			
RA	MARTIN T.R.;			
RT	"Cloning of two rabbit GRO homologues and their expression in			
RT	alveolar macrophages."			
RL	GENE 151:337-338(1994).			
DR	EMBL; L28933; G455343; "			
DR	PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.			
DR	PFAM; PF00048; 118; 1.			
FT	NON_TER			
SQ	SEQUENCE 66 AA; 7102 MW; D4C4BC7D CRC32;			
Query Match 89.5%; Score 77; DB 6; Length 66;				
Best Local Similarity 90.9%; Pred. No. 4.43e-07;				
Matches 10; Conservative 1; Mismatches 0; Indels 0; Gaps 0;				
Db	43	ACLNPAAPVMVK 53		
QY	2	ACLNPAASPMVK 12		
RESULT 2				
ID	Q46678			
AC	Q46678			
DT	01-JUN-1998	(TREMBLREL. 06, CREATED)		
DT	01-JUN-1998	(TREMBLREL. 06, LAST SEQUENCE UPDATE)		
DT	01-AUG-1998	(TREMBLREL. 07, LAST ANNOTATION UPDATE)		
DE	GRO.			
OS	OVIS ARIES (SHEEP).			
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;			

OC ARTIODACTYLIA; RUMINANTIA; PECORA; BOVOIDEA; BOVIDAE; CAPRINAE; OVIS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RA YOSHIMURA T., MODI W.S.;
 RL SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL: U95814; G2735499;
 SQ SEQUENCE 103 AA; 10820 MW; C34945B7 CRC32;

Query Match 84.9%; Score 73; DB 6; Length 103;
 Best Local Similarity 90.0%; Pred. No. 5.71e-06;
 Matches 9; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 81 CLNPAAPMVK 90
 QY 3 CLNPASPVMK 12

RESULT 3
 ID O62764 PRELIMINARY; PRT; 59 AA.
 AC O62764;
 DT 01-AUG-1998 (TREMREL. 07, CREATED)
 DT 01-AUG-1998 (TREMREL. 07, LAST SEQUENCE UPDATE)
 DT 01-AUG-1998 (TREMREL. 07, LAST ANNOTATION UPDATE)
 DE MELANOMA GROWTH STIMULATORY ACTIVITY HOMOLOG (FRAGMENT).
 GN MGSA.
 OS EQUUS CABALLUS (HORSE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC PERISSODACTYLIA; EQUIDAE; EQUUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE-SKIN;
 RA RIEDER S., CHECA-CORTES M.L., JOERG H., STRANZINGER G.;
 RL SUBMITTED (MAR-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL: AF053497; G3033533;
 FT NON_TER 1
 SQ SEQUENCE 59 AA; 6344 MW; 0C5EA9CC CRC32;

Query Match 82.6%; Score 71; DB 6; Length 59;
 Best Local Similarity 72.7%; Pred. No. 2.01e-05;
 Matches 8; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 36 TCLNPEAPMVK 46
 QY 2 ACLNPASPVMK 12

RESULT 4
 ID P92126 PRELIMINARY; PRT; 377 AA.
 AC P92126;
 DT 01-MAY-1997 (TREMREL. 03, CREATED)
 DT 01-MAY-1997 (TREMREL. 03, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
 DE ALPHA-TUBULIN (FRAGMENT).
 GN ATUB.
 OS NOSEMA LOCUSTAE.
 OC EUKARYOTA; MICROSPORIDIA; NOSEMATIDAE; NOSEMA.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN-ATCC 30860;
 RX MEDLINE; 97109817.
 RA KEELING P.J., DOOLITTLE W.F.;
 RT "Alpha-tubulin from early-diverging eukaryotic lineages and the evolution of the tubulin family."
 RL MOL. BIOL. EVOL. 13:1297-1305(1996).
 DR EMBL: U66907; G1755092;
 DR PFAM: PF00091; tubulin; 1.
 FT NON_TER 377
 SQ SEQUENCE 377 AA; 41951 MW; 604D34D6 CRC32;

Query Match 69.8%; Score 60; DB 5; Length 377;
 Best Local Similarity 72.7%; Pred. No. 1.52e-02;
 Matches 8; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Db 265 ACNPESOMVK 275
 QY 2 ACLNPASPVMK 12

RESULT 5
 ID Q26047 PRELIMINARY; PRT; 331 AA.
 AC Q26047;
 DT 01-NOV-1996 (TREMREL. 01, CREATED)
 DT 01-NOV-1996 (TREMREL. 01, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
 DE ALPHA-TUBULIN ISOTYPE 2 (FRAGMENT).
 GN PL<ALPHA>2.

OS PARACENTROTUS LIVIDUS (COMMON SEA URCHIN).
 OC EUKARYOTA; METAZOA; ECHINODERMATA; ECHINOZOA; EUECHINOIDEA;
 OC ECHINACEA; ECHINOIDA; ECHINIDAE; PARACENTROTUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 96015119.
 RA GIANGUZZA F., CASANO C., RAGUSA M.;
 RT "Alpha-tubulin marker gene of neural territory of sea urchin embryos detected by whole-mount in situ hybridization."
 RL INT. J. DEV. BIOL. 39:477-483(1995).
 DR EMBL: S80438; G1245776;
 DR PFAM: PF00091; tubulin; 1.
 FT NON_TER 331
 SQ SEQUENCE 331 AA; 36955 MW; 1CCB86D1 CRC32;

Query Match 67.4%; Score 58; DB 5; Length 331;
 Best Local Similarity 58.3%; Pred. No. 4.76e-02;
 Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 172 NACFEPANQMVK 183
 QY 1 KACLNPASPVMK 12

RESULT 6
 ID O01944 PRELIMINARY; PRT; 359 AA.
 AC O01944;
 DT 01-JUL-1997 (TREMREL. 04, CREATED)
 DT 01-JUL-1997 (TREMREL. 04, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
 DE ALPHA-4-TUBULIN (FRAGMENT).
 OS GECARCINUS LATERALIS.
 OC EUKARYOTA; METAZOA; ARTHROPODA; CRUSTACEA; MALACOSTRACA;
 OC EUMALACOSTRACA; EUCARIDA; DECAPODA; PLEOCYEMATA; BRACHYURA;
 OC BRACHYRHYNCHA; GRAPSOIDEA; GECARCINIDAE; GECARCINUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE-REGENERATING LIMB BUD;
 RX MEDLINE; 97288098.
 RA VARADARAJ K., KUMARI S.S., SKINNER D.M.;
 RT "Molecular characterization of four members of the alpha-tubulin gene family of the Bermuda land crab Gecarcinus lateralis."
 RL J. EXP. ZOOL. 278:63-77(1997).
 DR EMBL: U92648; G2098757;
 DR PFAM: PF00091; tubulin; 1.
 FT NON_TER 359
 SQ SEQUENCE 359 AA; 39873 MW; 862D6969 CRC32;

Query Match 67.4%; Score 58; DB 5; Length 359;
 Best Local Similarity 58.3%; Pred. No. 4.76e-02;
 Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 201 NACFEPANQMVK 212
 QY 1 KACLNPASPVMK 12

RESULT 7

ID	Q13748	PRELIMINARY;	PRT;	449 AA.	
AC	Q13748;				
DT	01-NOV-1996	(TREMREL. 01, CREATED)			
DT	01-NOV-1998	(TREMREL. 08, LAST SEQUENCE UPDATE)			
DT	01-NOV-1998	(TREMREL. 08, LAST ANNOTATION UPDATE)			
DE	ALPHA TUBULIN (ALPHA-TUBULIN) (FRAGMENT).				
GN	TUBA2.				
OS	HOMO SAPIENS (HUMAN).				
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;				
OC	CATARRHINI; HOMINIDAE; HOMO.				
RN	[1]				
RP	SEQUENCE FROM N.A.				
RX	MEDLINE; 98126445.				
RA	DODE C., WEIL D., LEVILLIERS J., CROZET F., CHAIB H., LEVI-ACOBAS F.,				
RA	GUILFORD P., PETIT C.;				
RT	"Sequence characterization of a newly identified human alpha-tubulin				
RT	gene (TUBA2)."				
RL	GENOMICS 47:125-130(1998).				
RN	[2]				
RP	SEQUENCE OF 352-449 FROM N.A.				
RA	BONALDO M., SU L., LAWTON L.N., SOARES M.B.;				
RL	SUBMITTED (JUL-1993) TO EMBL/GENBANK/DBJ DATA BANKS.				
DR	EMBL; AF005392; G2843123; -				
DR	EMBL; L11645; G306451; -				
FT	NON_TER 1				
SQ	SEQUENCE 449 AA; 49828 MW; 85360775 CRC32;				
	Query Match	67.4%;	Score 58;	DB 4;	Length 449;
	Best Local Similarity	58.3%;	Pred. No. 4.76e-02;		
	Matches	7;	Conservative	4;	Mismatches 1; Indels 0; Gaps 0;
Db	292 NACFEPANOMVK 303				
QY	1 KACLNPASPMVK 12				
	RESULT 8				
ID	Q42271	PRELIMINARY;	PRT;	449 AA.	
AC	Q42271;				
DT	01-JAN-1998	(TREMREL. 05, CREATED)			
DT	01-JAN-1998	(TREMREL. 05, LAST SEQUENCE UPDATE)			
DT	01-NOV-1998	(TREMREL. 08, LAST ANNOTATION UPDATE)			
DE	ALPHA-TUBULIN				
OS	BRACHYDANTIO RERIO (ZEBRAFISH) (ZEBRA DANIO).				
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; ACTINOPTERYGII; NEOPTERYGII;				
OC	TELEOSTEI; EUTELEOSTEI; OSTARIOPHYSI; CYPRINIFORMES; CYPRINOIDEA;				
OC	CYPRINIDAE; RASBORINAE; DANIO.				
RN	[1]				
RP	SEQUENCE FROM N.A.				
RA	BORMANN P., ZUMSTEG V.M., ROTH L.W.A., REINHARD E.;				
RL	J. NEUROSCI. RES. 0:0-0(1997).				
DR	EMBL; AF029250; G2599500; -				
DR	PFAM; PF00091; tubulin; 1.				
SQ	SEQUENCE 449 AA; 49953 MW; E0BEF20C CRC32;				
	Query Match	67.4%;	Score 58;	DB 13;	Length 449;
	Best Local Similarity	58.3%;	Pred. No. 4.76e-02;		
	Matches	7;	Conservative	4;	Mismatches 1; Indels 0; Gaps 0;
Db	293 NACFEPANOMVK 304				
QY	1 KACLNPASPMVK 12				
	RESULT 9				
ID	Q76659	PRELIMINARY;	PRT;	450 AA.	
AC	Q76659;				
DT	01-NOV-1998	(TREMREL. 08, CREATED)			
DT	01-NOV-1998	(TREMREL. 08, LAST SEQUENCE UPDATE)			
DT	01-NOV-1998	(TREMREL. 08, LAST ANNOTATION UPDATE)			
DE	TUBULIN ALPHA CHAIN.				
GN	ATL.				
OS	ARTEMIA SANFRANCISCANA (BRINE SHRIMP) (ARTEMIA FRANCISCANA).				
OC	EUKARYOTA; METAZOA; ARTHROPODA; CRUSTACEA; BRANCHIOPODA; ANOSTRACA;				
OC	ARTEMIIDAE; ARTEMIA.				
RN	[1]				
RP	SEQUENCE FROM N.A.				
RA	ZHENG Y., ROY P., LIANG P., MACRAE T.H.;				
RT	"Cloning and sequencing of an alpha-tubulin cDNA from Artemia				
RT	franciscana."				
RL	SUBMITTED (JUL-1998) TO EMBL/GENBANK/DBJ DATA BANKS.				
DR	EMBL; AF078670; G3348122; -				
SQ	SEQUENCE 450 AA; 49938 MW; 8B76A064 CRC32;				
	Query Match	67.4%;	Score 58;	DB 5;	Length 450;
	Best Local Similarity	58.3%;	Pred. No. 4.76e-02;		
	Matches	7;	Conservative	4;	Mismatches 1; Indels 0; Gaps 0;
Db	293 NACFEPANOMVK 304				
QY	1 KACLNPASPMVK 12				
	RESULT 10				
ID	Q94985	PRELIMINARY;	PRT;	451 AA.	
AC	Q94985;				
DT	01-FEB-1997	(TREMREL. 02, CREATED)			
DT	01-FEB-1997	(TREMREL. 02, LAST SEQUENCE UPDATE)			
DT	01-NOV-1998	(TREMREL. 08, LAST ANNOTATION UPDATE)			
DE	ALPHA-1 TUBULIN				
OS	HIRUDO MEDICINALIS (MEDICINAL LEECH).				
OC	EUKARYOTA; METAZOA; ANNELIDA; CLITELLATA; HIRUDINIDA; HIRUDINEA;				
OC	ARYNCHOBELLIDA; HIRUDINIFORMES; HIRUDINIDAE; HIRUDO.				
RN	[1]				
RP	SEQUENCE FROM N.A.				
RA	FEDOROV A.N., KORNEEV S.A., QUINN Z.A., BLACKSHAW S.E., DAVIES J.A.;				
RL	SUBMITTED (SEP-1996) TO EMBL/GENBANK/DBJ DATA BANKS.				
DR	EMBL; U67675; G1527170; -				
DR	EMBL; U67677; G1532191; -				
DR	PFAM; PF00091; tubulin; 1.				
SQ	SEQUENCE 451 AA; 50123 MW; 831B07C4 CRC32;				
	Query Match	67.4%;	Score 58;	DB 5;	Length 451;
	Best Local Similarity	58.3%;	Pred. No. 4.76e-02;		
	Matches	7;	Conservative	4;	Mismatches 1; Indels 0; Gaps 0;
Db	293 NACFEPANOMVK 304				
QY	1 KACLNPASPMVK 12				
	RESULT 11				
ID	Q26595	PRELIMINARY;	PRT;	451 AA.	
AC	Q26595;				
DT	01-NOV-1996	(TREMREL. 01, CREATED)			
DT	01-NOV-1996	(TREMREL. 01, LAST SEQUENCE UPDATE)			
DT	01-NOV-1998	(TREMREL. 08, LAST ANNOTATION UPDATE)			
DE	ALPHA-TUBULIN				
GN	SAT1.				
OS	SCHISTOSOMA MANSONI (BLOOD FLUKE).				
OC	EUKARYOTA; METAZOA; PLATYHELMINTHES; TREMATODA; DIGenea; STRIGEIDIDA;				
OC	SCHISTOSOMATOIDEA; SCHISTOSOMATIDAE; SCHISTOSOMA.				
RN	[1]				
RP	SEQUENCE FROM N.A.				
RX	MEDLINE; 9228010.				
RA	WEBSTER P.J., SETA K.A., CHUNG S.C., MANSOUR T.E.;				
RT	"A cDNA encoding an alpha-tubulin from Schistosoma mansoni."				
RL	MOL. BIOCHEM. PARASITOL. 51:169-170(1992).				
DR	EMBL; M80214; G161072; -				
DR	PFAM; PF00091; tubulin; 1.				
SQ	SEQUENCE 451 AA; 50007 MW; B089A1DF CRC32;				
	Query Match	67.4%;	Score 58;	DB 5;	Length 451;
	Best Local Similarity	58.3%;	Pred. No. 4.76e-02;		
	Matches	7;	Conservative	4;	Mismatches 1; Indels 0; Gaps 0;

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Db 293 NACFEPANOMVK 304
QY 1 KACLNPASPMVK 12

RESULT 12
ID C01942 PRELIMINARY; PRT; 451 AA.
AC C01942;
DT 01-JUL-1997 (TREMBLREL. 04, CREATED)
DT 01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE ALPHA-2-TUBULIN.
OS GECARCINUS LATERALIS.
OC EUKARYOTA; METAZOA; ARTHROPODA; CRUSTACEA; MALACOSTRACA;
OC EUMALACOSTRACA; EUCARIDA; DECAPODA; PLEOCYEMATA; BRACHYURA;
OC BRACHYRHYNCHA; GRAPSOIDEA; GECARCINIDAE; GECARCINUS.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-REGENERATING LIMB BUD;
RX MEDLINE; 97288098.
RA VARADARAJ K., KUMARI S.S., SKINNER D.M.;
RT "Molecular characterization of four members of the alpha-tubulin gene
family of the Bermuda land crab Gecarcinus lateralis.";
RL J. EXP. ZOOL. 278:63-77(1997).
DR EMBL; U92646; G2098753; -.
DR PFAM; PF00091; tubulin; 1.
SQ SEQUENCE 451 AA; 50342 MW; 17EB1096 CRC32;

Query Match 67.4%; Score 58; DB 5; Length 451;
Best Local Similarity 58.3%; Pred. No. 4.76e-02;
Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 293 NACFEPANOMVK 304
QY 1 KACLNPASPMVK 12

RESULT 13
ID Q94978 PRELIMINARY; PRT; 451 AA.
AC Q94978;
DT 01-FEB-1997 (TREMBLREL. 02, CREATED)
DT 01-FEB-1997 (TREMBLREL. 02, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE ALPHA-2 TUBULIN.
OS HIRUDO MEDICINALIS (MEDICINAL LEECH).
OC EUKARYOTA; METAZOA; ANNELIDA; CLITELLATA; HIRUDINIDA; HIRUDINEA;
OC ARYNCHOBDELLIDA; HIRUDINIFORMES; HIRUDINIDAE; HIRUDO.
RN [1]
RP SEQUENCE FROM N.A.
RA FEDOROV A.N., KORNEEV S.A., QUINN Z.A., BLACKSHAW S.E., DAVIES J.A.;
RL SUBMITTED (SEP-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; U57676; G1527172; -.
DR EMBL; U67678; G1532193; -.
DR PFAM; PF00091; tubulin; 1.
SQ SEQUENCE 451 AA; 50148 MW; 34321A1D CRC32;

Query Match 67.4%; Score 58; DB 5; Length 451;
Best Local Similarity 58.3%; Pred. No. 4.76e-02;
Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 293 NACFEPANOMVK 304
QY 1 KACLNPASPMVK 12

RESULT 14
ID O01941 PRELIMINARY; PRT; 451 AA.
AC O01941;
DT 01-JUL-1997 (TREMBLREL. 04, CREATED)
DT 01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE ALPHA-1-TUBULIN.
OS GECARCINUS LATERALIS.

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OC EUKARYOTA; METAZOA; ARTHROPODA; CRUSTACEA; MALACOSTRACA;
OC EUMALACOSTRACA; EUCARIDA; DECAPODA; PLEOCYEMATA; BRACHYURA;
OC BRACHYRHYNCHA; GRAPSOIDEA; GECARCINIDAE; GECARCINUS.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-REGENERATING LIMB BUD;
RX MEDLINE; 97288098.
RA VARADARAJ K., KUMARI S.S., SKINNER D.M.;
RT "Molecular characterization of four members of the alpha-tubulin gene
family of the Bermuda land crab Gecarcinus lateralis.";
RL J. EXP. ZOOL. 278:63-77(1997).
DR EMBL; U92645; G2098751; -.
DR PFAM; PF00091; tubulin; 1.
SQ SEQUENCE 451 AA; 50179 MW; F926FE41 CRC32;

Query Match 67.4%; Score 58; DB 5; Length 451;
Best Local Similarity 58.3%; Pred. No. 4.76e-02;
Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 293 NACFEPANOMVK 304
QY 1 KACLNPASPMVK 12

RESULT 15
ID Q27122 PRELIMINARY; PRT; 451 AA.
AC Q27122;
DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE ALPHA-TUBULIN.
OS URECHIS CAUPO (INNKEEPER WORM) (SPOONWORM).
OC EUKARYOTA; METAZOA; ECHIURA; XENOPNEUSTA; URECHIDAE; URECHIS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 94155469.
RA ROSENTHAL E.;
RT "Sequence analysis of translationally controlled maternal mRNAs from
Urechis caupo.";
RL DEV. GENET. 14:485-491(1993).
RN [2]
RP SEQUENCE FROM N.A.
RA ROSENTHAL E.;
RL SUBMITTED (JUN-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; U30467; G942596; -.
DR PFAM; PF00091; tubulin; 1.
SQ SEQUENCE 451 AA; 50089 MW; FE5EFF3 CRC32;

Query Match 67.4%; Score 58; DB 5; Length 451;
Best Local Similarity 58.3%; Pred. No. 4.76e-02;
Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 293 NACFEPANOMVK 304
QY 1 KACLNPASPMVK 12

Search completed: Fri Feb 4 18:10:43 2000
Job time : 50 secs.

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 M P S R L A
 (TW)

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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 18:15:31 2000; MasPar time 5.08 Seconds
 128.999 Million cell updates/sec

Tabular output not generated.

Title: >US-09-150-813-74
 Description: Perfect Score: 86
 Sequence: 1 KACLNPAAPMVQ 12

Scoring table: PAM 150
 Gap 15

Searched: 179066 seqs, 54579741 residues

Post-processing: Minimum Match 0%
 Listing first 45 summaries

Database: sptrembl9
 1:sp.archaea 2:sp.bacteria 3:sp.fungi 4:sp.human
 5:sp.invertebrate 6:sp.mammal 7:sp.mhc 8:sp.organelle
 9:sp.phage 10:sp.plant 11:sp.rodent 12:sp.unclassified
 13:sp.vertebrate 14:sp.virus

Statistics: Mean 22.969; Variance 26.140; scale 0.879

Pred. No. is the number of results predicted by chance to have a
 score greater than or equal to the score of the result being printed,
 and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	DB ID	Description	Pred. No.
1	70	81.4	66	6	PERMEABILITY FACTOR 2	4.94e-05
2	66	76.7	103	6	GRO.	5.51e-04
3	64	74.4	59	6	MELANOMA GROWTH STIMUL	1.50e-03
4	57	66.3	852	10	1,4-ALPHA-GLUCAN BRANC	9.70e-02
5	53	61.6	377	5	ALPHA-TUBULIN (FRAGMEN	8.43e-01
6	53	61.6	591	14	GAG PRO POL POLYPROTEI	8.43e-01
7	53	61.6	859	14	PR110.	8.43e-01
8	53	61.6	1754	14	PR160.	8.43e-01
9	52	60.5	307	3	HYPOTHETICAL 33.9 KD Z	1.43e+00
10	52	60.5	419	2	ZEAXANTHIN GLUCOSYL TR	1.43e+00
11	51	59.3	268	10	HYPOTHETICAL 30.0 KD P	2.40e+00
12	51	59.3	331	5	ALPHA-TUBULIN ISOTYPE	2.40e+00
13	51	59.3	339	5	ALPHA-TUBULIN (FRAGM	2.40e+00
14	51	59.3	449	13	ALPHA-TUBULIN (ALPHA-T	2.40e+00
15	51	59.3	449	13	ALPHA-TUBULIN	2.40e+00
16	51	59.3	450	5	TUBULIN ALPHA CHAIN.	2.40e+00
17	51	59.3	451	5	ALPHA-1-TUBULIN.	2.40e+00
18	51	59.3	451	5	ALPHA-2-TUBULIN.	2.40e+00
19	51	59.3	451	5	ALPHA-1-TUBULIN.	2.40e+00
20	51	59.3	451	5	ALPHA-TUBULIN.	2.40e+00

21 51 59.3 451 5 Q27122 ALPHA-TUBULIN. 2.40e+00
 22 51 59.3 451 5 Q94978 ALPHA-2-TUBULIN. 2.40e+00
 23 51 59.3 614 13 Q91855 SUP35 (FRAGMENT). 2.40e+00
 24 51 59.3 1296 4 Q13463 PATCHED HOMOLOG (PTC). 2.40e+00
 25 51 59.3 1434 11 Q61115 PATCHED HOMOLOG. 2.40e+00
 26 51 59.3 1442 13 Q90693 PATCHED PROTEIN. 2.40e+00
 27 51 59.3 1447 4 Q13635 PATCHED. 2.40e+00
 28 50 58.1 331 14 P88953 ORF 62. 4.00e+00
 29 50 58.1 380 10 Q43568 DNA-BINDING PROTEIN (F 4.00e+00
 30 50 58.1 380 5 P92120 ALPHA-TUBULIN (FRAGMEN 4.00e+00
 31 50 58.1 443 5 Q01943 ALPHA-3-TUBULIN (FRAGM 4.00e+00
 32 50 58.1 535 4 Q14544 C154. 4.00e+00
 33 50 58.1 546 10 Q40451 DNA-BINDING PROTEIN. 4.00e+00
 34 50 58.1 2610 5 Q19482 F15B9.7 PROTEIN. 4.00e+00
 35 50 58.1 2820 11 P97526 NEUROFIBROMIN. 4.00e+00
 36 49 57.0 135 5 Q16915 CYTOCHROME P450 (FRAGM 6.63e+00
 37 49 57.0 257 13 Q42335 PTC1 (FRAGMENT). 6.63e+00
 38 49 57.0 449 5 Q18688 TBA-2 PROTEIN. 6.63e+00
 39 49 57.0 449 5 Q17409 ALPHA-1 TUBULIN. 6.63e+00
 40 49 57.0 522 14 Q91334 GLYCOPROTEIN E. 6.63e+00
 41 49 57.0 522 14 Q41526 CUS8. 6.63e+00
 42 49 57.0 611 14 Q65855 HELICASE. 6.63e+00
 43 49 57.0 4340 2 Q30764 POLYKETIDE SYNTHASE MO 6.63e+00
 44 48 55.8 830 10 Q04864 1,4-ALPHA-GLUCAN BRANC 1.09e+01
 45 48 55.8 1763 14 Q66913 NON-STRUCTURAL PROTEIN 1.09e+01

ALIGNMENTS

RESULT 1
 ID Q28724 PRELIMINARY; PRT; 66 AA.
 AC Q28724;
 DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
 DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE PERMEABILITY FACTOR 2 (FRAGMENT).
 GN PF2.
 OS ORYCTOLAGUS CUNICULUS (RABBIT).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC LAGOMORPHA; LEPORIDAE; ORYCTOLAGUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN-NEW ZEALAND WHITE;
 RX MEDLINE; 95129889.
 RA JOHNSON M.C., GOODMAN R.B. II, KAJIKAWA O., WONG V.A., MONGOVIN S.M.,
 RA MARTIN T.R.;
 RT "Cloning of two rabbit GRO homologues and their expression in
 RT alveolar macrophages."
 RL GENE 151:337-338(1994).
 DR EMBL; L28933; G455343;
 DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 DR PFAM; PF00048; il8; 1.
 FT NON_TER 1
 SQ SEQUENCE 66 AA; 7102 MW; D4C4BC7D CRC32;

Query Match 81.4%; Score 70; DB 6; Length 66;
 Best Local Similarity 90.08; Pred. No. 4.94e-05;
 Matches 9; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 43 ACLNPAAPMV 52
 |||||:||||
 QY 2 ACLNPAAPMV 11

RESULT 2
 ID Q46678 PRELIMINARY; PRT; 103 AA.
 AC Q46678;
 DT 01-JUN-1998 (TREMBLREL. 06, CREATED)
 DT 01-JUN-1998 (TREMBLREL. 06, LAST SEQUENCE UPDATE)
 DT 01-AUG-1998 (TREMBLREL. 07, LAST ANNOTATION UPDATE)
 DE GRO.
 OS OVIS ARIES (SHEEP).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;

CC ARTIODACTYLA; RUMINANTIA; PECORA; BOVOIDEA; BOVIDAE; CAPRINAE; OVIS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RA YOSHIMURA T., MODI W.S.;
 RL SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; U95814; G2735499;
 SQ SEQUENCE 103 AA; 10820 MW; C34945B7 CRC32;

Query Match 76.7%; Score 66; DB 6; Length 103;
 Best Local Similarity 88.9%; Pred. No. 5.51e-04;
 Matches 8; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 81 CLNPAAPMV 89
 QY 3 CLNPASPMV 11

RESULT 3
 ID O62764 PRELIMINARY; PRT; 59 AA.
 AC O62764;
 DT 01-AUG-1998 (TREMBLREL. 07, CREATED)
 DT 01-AUG-1998 (TREMBLREL. 07, LAST SEQUENCE UPDATE)
 DT 01-AUG-1998 (TREMBLREL. 07, LAST ANNOTATION UPDATE)
 DE MELANOMA GROWTH STIMULATORY ACTIVITY HOMOLOG (FRAGMENT).
 GN MGSA.
 OS EQUUS CABALLUS (HORSE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC PERISSODACTYLA; EQUIDAE; EQUUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE-SKIN;
 RA RIEDER S., CHECA-CORTES M.L., JOERG H., STRANZINGER G.;
 RL SUBMITTED (MAR-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; AF053497; G3033533;
 FT NON TER 1
 SQ SEQUENCE 59 AA; 6344 MW; 0C5EA8CC CRC32;

Query Match 74.4%; Score 64; DB 6; Length 59;
 Best Local Similarity 70.0%; Pred. No. 1.80e-03;
 Matches 7; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 36 TCLNPEAPMV 45
 QY 2 ACLNPASPMV 11

RESULT 4
 ID O08131 PRELIMINARY; PRT; 852 AA.
 AC O08131;
 DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
 DT 01-JAN-1998 (TREMBLREL. 05, LAST SEQUENCE UPDATE)
 DT 01-JAN-1999 (TREMBLREL. 09, LAST ANNOTATION UPDATE)
 DE (1,4-ALPHA-GLUCAN BRANCHING ENZYME PRECURSOR (EC 2.4.1.18)
 DE (1,4-ALPHA-GLUCAN BRANCHING ENZYME R-3) (STARCH BRANCHING ENZYME)
 DE (Q-ENZYME).
 GN SBE.
 OS MANIHOT ESCULENTA (CASSAVA) (MANIOT).
 OC EUKARYOTA; VIRIDIPANTAE; STREPTOPHYTA; EMBRYOPHYTA; TRACHEOPHYTA;
 OC EUPHYLLIPHYTES; SPERMATOPHYTA; MAGNOLIOPHYTA; EUDICOTYLEDONS; ROSIDAE;
 OC EUPHORBIALES; EUPHORBIACEAE; MANIHOT.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN-CV. M.COL 22; TISSUE-TUBEROUS ROOTS;
 RA SAEHUZZANAN S.N., JACOBSEN E., VISSER R.G.;
 RL SUBMITTED (JAN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [2]
 RP SEQUENCE OF 681-765 FROM N.A.
 RX MEDLINE; 93099233.
 RA SAEHUZZANAN S.N., JACOBSEN E., VISSER R.G.;
 RT "Cloning, partial sequencing and expression of a cDNA coding for
 RT branching enzyme in cassava."
 RL PLANT MOL. BIOL. 20:809-819(1992).
 CC -!- CATALYTIC ACTIVITY: FORMATION OF 1,6-GLUCOSIDIC LINKAGES OF

CC GLYCOGEN.
 CC -!- SUBUNIT: MONOMER.
 CC -!- PATHWAY: THIRD STEP IN STARCH BIOSYNTHESIS.
 CC -!- SUBCELLULAR LOCATION: AMYLOPLAST.
 CC -!- SIMILARITY: BELONGS TO FAMILY 13 OF GLYCOSYL HYDROLASES, ALSO
 CC KNOWN AS THE ALPHA-AMYLASE FAMILY.
 DR EMBL; X77012; E96414;
 DR EMBL; X69714; G313295;
 DR PFAM; PF00128; alpha-amylase; 1.
 DR MENDEL; 13138; MANES; Sbel; 2.
 KW TRANSIT PEPTIDE; TRANSFERASE; GLYCOSYLTRANSFERASE;
 KW STARCH BIOSYNTHESIS.
 FT TRANSIT 1 74 POTENTIAL.
 FT CHAIN 75 852 1,4-ALPHA-GLUCAN BRANCHING ENZYME.
 SQ SEQUENCE 852 AA; 96684 MW; 7764CE83 CRC32;

Query Match 66.3%; Score 57; DB 10; Length 852;
 Best Local Similarity 58.3%; Pred. No. 9.70e-02;
 Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 572 MSCLTDASPMVD 583
 QY 1 KACLNPASPMVQ 12

RESULT 5
 ID P92126 PRELIMINARY; PRT; 377 AA.
 AC P92126;
 DT 01-MAY-1997 (TREMBLREL. 03, CREATED)
 DT 01-MAY-1997 (TREMBLREL. 03, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE ALPHA-TUBULIN (FRAGMENT).
 GN ATUB.
 OS NOSEMA LOCUSTAE.
 OC EUKARYOTA; MICROSPORIDIA; NOSEMATIDAE; NOSEMA.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN-ATCC 30860;
 RX MEDLINE; 97109817.
 RA KEELING P.J., DOOLITTLE W.F.;
 RT "Alpha-tubulin from early-diverging eukaryotic lineages and the
 RT evolution of the tubulin family."
 RL MOL. BIOL. EVOL. 13:1297-1305(1996).
 DR EMBL; U66907; G1755092;
 DR PFAM; PF00091; tubulin; 1.
 FT NON TER 1 377
 FT NON TER 377 377
 SQ SEQUENCE 377 AA; 41951 MW; 604D34D6 CRC32;

Query Match 61.6%; Score 53; DB 5; Length 377;
 Best Local Similarity 70.0%; Pred. No. 8.43e-01;
 Matches 7; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Db 265 ACNPESOMV 274
 QY 2 ACLNPASPMV 11

RESULT 6
 ID Q83391 PRELIMINARY; PRT; 591 AA.
 AC Q83391;
 DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
 DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
 DT 01-JAN-1999 (TREMBLREL. 09, LAST ANNOTATION UPDATE)
 DE GAG PRO POL POLYPROTEIN.
 DE GAG PRO POL.
 OS MOUSE MAMMARY TUMOR VIRUS.
 OC VIRUSES; RETROVIRIDAE; RETROVIRIDAE; MAMMALIAN TYPE B RETROVIRUSES.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 87112944.
 RA MOORE R., DIXON M., SMITH R., PETERS G., DICKSON C.;
 RT "Complete nucleotide sequence of a Milk-transmitted mouse mammary

Sat Feb 5 12:05:12 2000

RT tumor viurs: two frameshift suppression events are required for
 translation of gag and pol.;
 RL J. VIROL. 61:480-490(1987).

[2]
 RP SEQUENCE FROM N.A.
 RA NISHIO M., XU L., SASAKI M., HAGA S., OKUMOTO M., MORI N.,
 RA SARKAR N.H., ACHA-ORBEA H., ENAMI J., INAI S.;
 "Complete Nucleotide Sequence of mouse mammary tumor virus from JYG
 RT chinese wild mice: absence of bacterial insertion sequences in the
 RT cloned viral gag gene";
 RL BREAST CANCER 1:89-94(1994).
 DR EMBL; D16249; D1004281; -.
 DR PFAM; PF00098; zf-CCHC; 1.
 DR PFAM; PF00607; g9g-p24; 1.
 KW POLYPROTEIN.
 SQ SEQUENCE 591 AA; 66268 MW; 176E719A CRC32;

Query Match 61.6%; Score 53; DB 14; Length 591;
 Best Local Similarity 41.7%; Pred. No. 8.43e-01;
 Matches 5; Conservative 7; Mismatches 0; Indels 0; Gaps 0;

Db 481 RACLDASPAVQ 492
 QY 1 KACLNPASPMPVQ 12

RESULT 7
 ID O92804 PRELIMINARY; PRT; 859 AA.
 AC O92804;
 DT 01-NOV-1998 (TREMBLREL. 08, CREATED)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE PR110.
 DE GAG-PRO.
 GN GAG-PRO.
 OS MOUSE MAMMARY TUMOR VIRUS.
 OC VIRUSES; RETROID VIRUSES; RETROVIRIDAE; MAMMALIAN TYPE B RETROVIRUSES.
 [1]
 RP SEQUENCE FROM N.A.
 RA PETROPOULOS C.J.;
 RA "Appendix 2: Retroviral taxonomy, protein structure, sequences, and
 RT genetic maps.";
 RL (IN) COFFIN J.M. (EDS.); RETROVIRUSES:757-757;
 RL COLD SPRING HARBOR LABORATORY PRESS, NY, USA (1997).
 [2]
 RP SEQUENCE FROM N.A.
 RA CHAPPEY C.;
 RL SUBMITTED (NOV-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; AF033807; G2801454; -.
 FT CHAIN 99 194 PP21 XX.
 FT CHAIN 195 227 P3.
 FT CHAIN 228 252 P8.
 FT CHAIN 252 495 P27 CA.
 FT CHAIN 496 744 P14 NC.
 FT CHAIN 744 859 P30DU-P13PR-RT-IN.
 SQ SEQUENCE 859 AA; 95277 MW; C40C054D CRC32;

Query Match 61.6%; Score 53; DB 14; Length 859;
 Best Local Similarity 41.7%; Pred. No. 8.43e-01;
 Matches 5; Conservative 7; Mismatches 0; Indels 0; Gaps 0;

Db 480 RACLDASPAVQ 491
 QY 1 KACLNPASPMPVQ 12

RESULT 8
 ID O56220 PRELIMINARY; PRT; 1754 AA.
 AC O56220;
 DT 01-JUN-1998 (TREMBLREL. 06, CREATED)
 DT 01-JUN-1998 (TREMBLREL. 06, LAST SEQUENCE UPDATE)
 DT 01-AUG-1998 (TREMBLREL. 07, LAST ANNOTATION UPDATE)
 DE PR160.
 GN GAG-PRO-POL.

OS MOUSE MAMMARY TUMOR VIRUS.
 OC VIRUSES; RETROID VIRUSES; RETROVIRIDAE; MAMMALIAN TYPE B RETROVIRUSES.
 [1]
 RP SEQUENCE FROM N.A.
 RA PETROPOULOS C.J.;
 RL (IN) COFFIN J.M. (EDS.); RETROVIRUSES:757-757;
 RL COLD SPRING HARBOR LABORATORY PRESS, NY, USA (1997).
 [2]
 RP SEQUENCE FROM N.A.
 RA CHAPPEY C.;
 RL SUBMITTED (NOV-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; AF033807; G2801455; -.
 FT CHAIN 99 194 PP21 XX.
 FT CHAIN 195 227 P3.
 FT CHAIN 228 252 P8.
 FT CHAIN 252 495 P27 CA.
 FT CHAIN 496 744 P14 NC.
 FT CHAIN 744 1754 P30DU-P13PR-RT-IN.
 SQ SEQUENCE 1754 AA; 196983 MW; 9BA7E7E1 CRC32;

Query Match 61.6%; Score 53; DB 14; Length 1754;
 Best Local Similarity 41.7%; Pred. No. 8.43e-01;
 Matches 5; Conservative 7; Mismatches 0; Indels 0; Gaps 0;

Db 480 RACLDASPAVQ 491
 QY 1 KACLNPASPMPVQ 12

RESULT 9
 ID O13713 PRELIMINARY; PRT; 307 AA.
 AC O13713;
 DT 01-JUN-1998 (TREMBLREL. 06, CREATED)
 DT 01-JUN-1998 (TREMBLREL. 06, LAST SEQUENCE UPDATE)
 DT 01-JUN-1998 (TREMBLREL. 06, LAST ANNOTATION UPDATE)
 DE HYPOTHETICAL 33.9 KD ZINC FINGER PROTEIN C14C4.06C IN CHROMOSOME I.
 DE HYPOTHETICAL 33.9 KD ZINC FINGER PROTEIN C14C4.06C IN CHROMOSOME I.
 GN SPAC14C4.06C.
 OS SCHIZOSACCHAROMYCES POMBE (FISSION YEAST).
 OC EUKARYOTA; FUNGI; ASCOMYCOTA; ARCHIASCOMYCETES;
 OC SCHIZOSACCHAROMYCETALES; SCHIZOSACCHAROMYCETACEAE;
 OC SCHIZOSACCHAROMYCES.
 [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN-972;
 RA DEVLIN K., CHURCHER C.M., BARRELL B.G., RAJANDREAM M.A., WOOD V.;
 RL SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 CC -!- SUBCELLULAR LOCATION: NUCLEAR (POTENTIAL).
 DR EMBL; Z98596; E334264; -.
 KW HYPOTHETICAL PROTEIN; NUCLEAR PROTEIN; DNA-BINDING; ZINC-FINGER;
 KW METAL-BINDING.
 FT ZN_FING 184 199 C3H-TYPE.
 FT SEQUENCE 307 AA; 33929 MW; 7B5BE6D8 CRC32;

Query Match 60.5%; Score 52; DB 3; Length 307;
 Best Local Similarity 50.0%; Pred. No. 1.43e+00;
 Matches 6; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

Db 257 KPCLNPAACRFH 268
 QY 1 KACLNPASPMPVQ 12

RESULT 10
 ID P72650 PRELIMINARY; PRT; 419 AA.
 AC P72650;
 DT 01-FEB-1997 (TREMBLREL. 02, CREATED)
 DT 01-FEB-1997 (TREMBLREL. 02, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE ZEAXANTHIN GLUCOSYL TRANSFERASE.
 GN CRTX.
 OS SYNECHOCYSTIS SP. (STRAIN PCC 6803).
 OC BACTERIA; CYANOBACTERIA; CHROCOCCALES; SYNECHOCYSTIS.
 RN [1]

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RP SEQUENCE FROM N.A.
RC STRAIN-PCC6803;
RA TABATA S.;
RL SUBMITTED (JUN-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN-PCC6803;
RX MEDLINE: 97061201.
RA KANEKO T., SATO S., KOTANI H., TANAKA A., ASAMIZU E., NAKAMURA Y.,
RA MIYAJIMA N., HIROSAWA M., SUGIURA M., SASAMOTO S., KIMURA T.,
RA HOSOUCHI T., MATSUNO A., MURAKI A., NAKAZAKI N., NARUO K., OKUMURA S.,
RA SHIMPO S., TAKEUCHI C., WADA T., WATANABE A., YAMADA M., YASUDA M.,
RA TABATA S.;
RT "Sequence analysis of the genome of the unicellular cyanobacterium
RT Synechocystis sp. strain PCC6803. II. Sequence determination of the
RT entire genome and assignment of potential protein-coding regions.";
RL DNA RES. 3:109-136(1996).
DR EMBL; D90899; D1017385; -.
DR PFAM; PF00201; UDPGT; 1.
KW TRANSFERASE.
SQ SEQUENCE 419 AA; 45330 MW; 4208CF23 CRC32;

Query Match 60.5%; Score 52; DB 2; Length 419;
Best Local Similarity 77.8%; Pred. No. 1.43e+00;
Matches 7; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Db 331 CLNNAVPMV 339
   ||| |||
QY 3 CLNPASPMV 11

RESULT 11
ID O65707 PRELIMINARY; PRT; 268 AA.
AC O65707;
DT 01-AUG-1998 (TREMBLREL. 07, CREATED)
DT 01-AUG-1998 (TREMBLREL. 07, LAST SEQUENCE UPDATE)
DT 01-AUG-1998 (TREMBLREL. 07, LAST SEQUENCE UPDATE)
DE HYPOTHETICAL 30.0 KD PROTEIN.
GN TSK18.140.
OS ARABIDOPSIS THALIANA (MOUSE-EAR CRESS).
OC EUKARYOTA; VIRIDIPHYTES; STREPTOPHYTA; EMBRYOPHYTA; TRACHEOPHYTA;
OC EUPHYLOPHYTES; SPERMATOPHYTA; MAGNOLIOPHYTA; EUDICOTYLEDONS; ROSIDAE;
OC CAPPARALES; BRASSICACEAE; ARABIDOPSIS.
RN [1]
RP SEQUENCE FROM N.A.
RA BEVAN M., VAN DER SCHUEREN J., CHUANG Y-J., VOLT M., ROBBEN J.,
RA VOLCKAERT G., BANCROFT I., MEWES H.W., MAYER K.F.X., SCHUELLER C.;
RL SUBMITTED (APR-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [2]
RP SEQUENCE FROM N.A.
RA EU ARABIDOPSIS SEQUENCING PROJECT;
RL SUBMITTED (APR-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; AL022580; E1287627; -.
KW HYPOTHETICAL PROTEIN.
SQ SEQUENCE 268 AA; 29999 MW; DE86BCE CRC32;

Query Match 59.3%; Score 51; DB 10; Length 268;
Best Local Similarity 50.0%; Pred. No. 2.40e+00;
Matches 5; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 113 KSLAPNPL 122
   ||| |||
QY 1 KALNPASPM 10

RESULT 12
ID Q26047 PRELIMINARY; PRT; 331 AA.
AC Q26047;
DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
DE ALPHA-TUBULIN ISOTYPE 2 (FRAGMENT).
GN PL-ALPHA-2.

OS PARACENTROTUS LIVIDUS (COMMON SEA URCHIN).
OC EUKARYOTA; METAZOA; ECHINODERMATA; ECHINOZOA; ECHINOIDEA; EUECHINOIDEA;
OC ECHINACEA; ECHINOIDA; ECHINIDAE; PARACENTROTUS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE: 96015119.
RA GIANGUZZA F., CASANO C., RAGUSA M.;
RT "Alpha-tubulin marker gene of neutral territory of sea urchin embryos
RT detected by whole-mount in situ hybridization.";
RL INT. J. DEV. BIOL. 39:477-483(1995).
DR EMBL; S80438; G1245776; -.
DR PFAM; PF00091; tubulin; 1.
FT NON_TER 1
FT NON_TER 331
SQ SEQUENCE 331 AA; 36955 MW; 1CCB86D1 CRC32;

Query Match 59.3%; Score 51; DB 5; Length 331;
Best Local Similarity 54.5%; Pred. No. 2.40e+00;
Matches 6; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 172 NACFEPANOMV 182
   ||| |||
QY 1 KALNPASPMV 11

RESULT 13
ID O01944 PRELIMINARY; PRT; 359 AA.
AC O01944;
DT 01-JUL-1997 (TREMBLREL. 04, CREATED)
DT 01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE ALPHA-4-TUBULIN (FRAGMENT).
OS GECARCINUS LATERALIS.
OC EUKARYOTA; METAZOA; ARTHROPODA; CRUSTACEA; MALACOSTRACA;
OC EUMALACOSTRACA; EUCARIDA; DECAPODA; PLEOCYEMATA; BRACHYURA;
OC BRACHYRINCHA; GRAPSOIDEA; GECARCINIDAE; GECARCINUS.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-REGENERATING LIMB BUD;
RX MEDLINE: 97288098.
RA VARADARAJ K., KUMARI S.S., SKINNER D.M.;
RT "Molecular characterization of four members of the alpha-tubulin gene
RT family of the Hermuda land crab Gecarcinus lateralis.";
RL J. EXP. ZOOL. 278:63-77(1997).
DR EMBL; U92648; G2098757; -.
DR PFAM; PF00091; tubulin; 1.
FT NON_TER 1
FT NON_TER 359
SQ SEQUENCE 359 AA; 39873 MW; 862D6969 CRC32;

Query Match 59.3%; Score 51; DB 5; Length 359;
Best Local Similarity 54.5%; Pred. No. 2.40e+00;
Matches 6; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 201 NACFEPANOMV 211
   ||| |||
QY 1 KALNPASPMV 11

RESULT 14
ID Q13748 PRELIMINARY; PRT; 449 AA.
AC Q13748;
DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
DT 01-NOV-1998 (TREMBLREL. 08, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE ALPHA TUBULIN (ALPHA-TUBULIN) (FRAGMENT).
GN TUBA2.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE: 98126445.
RA DODE C., WEIL D., LEVILLIERS J., CROZET F., CHAIB H., LEVI-ACOBAS F.,

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RA GUILFORD P., PETIT C.;
RT "Sequence characterization of a newly identified human alpha-tubulin
RL gene (TUBA2)".;
RL GENOMICS 47:125-130(1998).
RN [2]
RP SEQUENCE OF 352-449 FROM N.A.
RA BONALDO M., SU L., LAWTON L.N., SOARES M.B.;
RL SUBMITTED (JUL-1993) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; AF005392; G2843123; -.
DR EMBL; L11645; G306451; -.
FT NON_TER 1
SQ SEQUENCE 449 AA; 49828 MW; 85360775 CRC32;

Query Match 59.3%; Score 51; DB 4; Length 449;
Best Local Similarity 54.5%; Pred. No. 2.40e+00;
Matches 6; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 292 NACFEPANQMV 302
QY 1 KACLNPASPMV 11

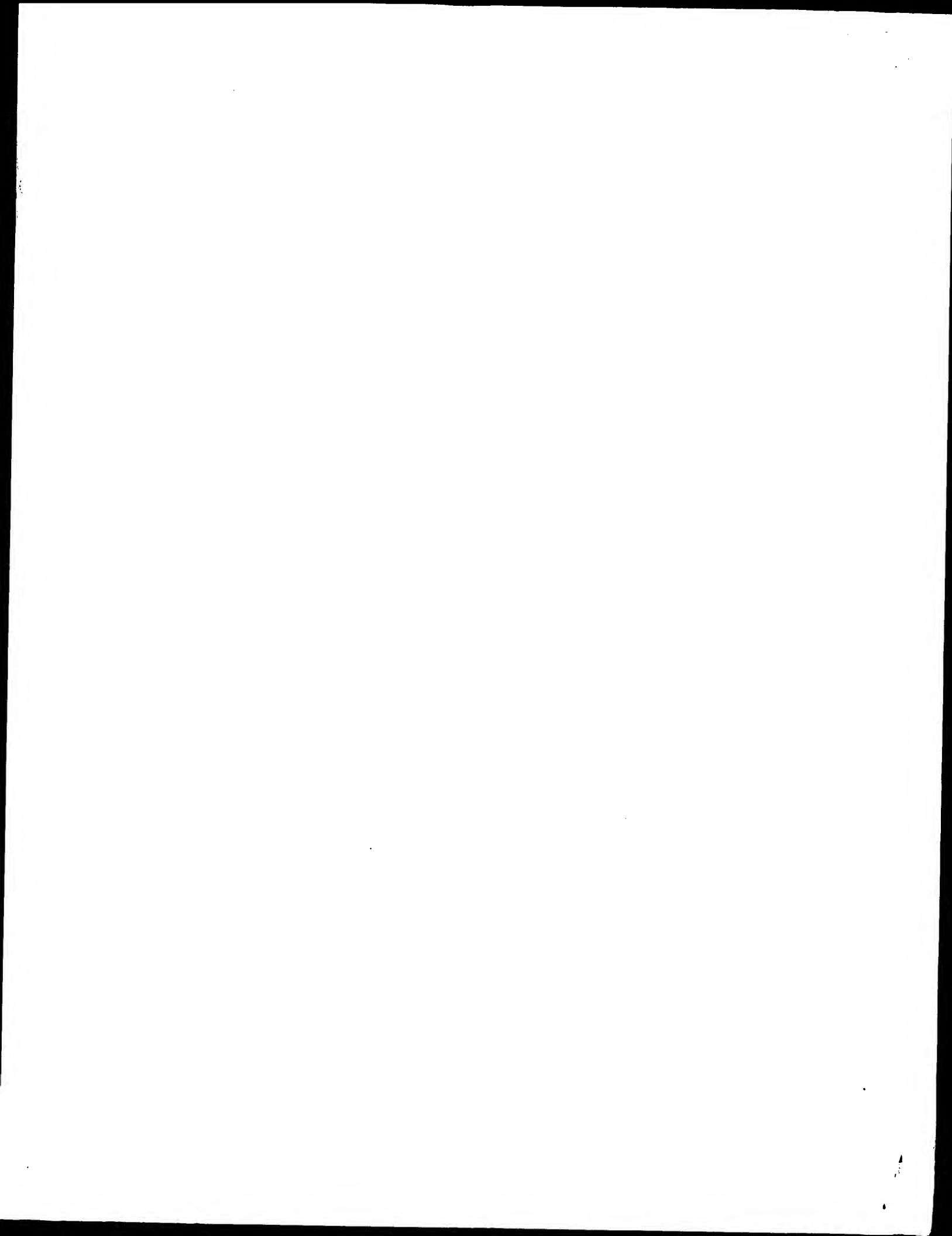
RESULT 15
ID 042271 PRELIMINARY; PRT; 449 AA.
AC 042271;
DT 01-JAN-1998 (TREMBLREL. 05, CREATED)
DT 01-JAN-1998 (TREMBLREL. 05, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE ALPHA-TUBULIN.
OS BRACHYDANTIO RERIO (ZEBRAFISH) (ZEBRA DANIO).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; ACTINOPTERYGII; NEOPTERYGII;
OC TELEOSTEI; EUTELEOSTEI; OSTARIOPHYSI; CYPRINIFORMES; CYPRINOIDEA;
OC CYPRINIDAE; RASBORINAE; DANIO.
RN [1]
RP SEQUENCE FROM N.A.
RA BORMANN P., ZUMSTEG V.M., ROTH L.W.A., REINHARD E.;
RL J. NEUROSCI. RES. 0-0-0(1997).
DR EMBL; AF029250; G2599500; -.
DR PFAM; PF00091; tubulin; 1.
SQ SEQUENCE 449 AA; 49953 MW; E0BEF20C CRC32;

Query Match 59.3%; Score 51; DB 13; Length 449;
Best Local Similarity 54.5%; Pred. No. 2.40e+00;
Matches 6; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 293 NACFEPANQMV 303
QY 1 KACLNPASPMV 11

```

Search completed: Fri Feb 4 18:16:34 2000
Job time : 63 secs.



WQISRELE (TM)

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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 16:58:12 2000; Maspar time 3.49 Seconds
60.986 Million cell updates/sec

Tabular output not generated.

Title: >US-09-150-813-7
Description: (1-10) from US09150813.pep

Perfect Score: 84

Sequence: 1 CADPKQKWQ 10

Scoring table: PAM 150
Gap 15

Searched: 170751 seqs, 21266608 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: a-genseq35
1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
14:part14 15:part15 16:part16 17:part17 18:part18
19:part19 20:part20 21:part21 22:part22 23:part23
24:part24 25:part25 26:part26 27:part27 28:part28
29:part29 30:part30 31:part31 32:part32 33:part33
34:part34 35:part35 36:part36 37:part37 38:part38
39:part39

Statistics: Mean 17.907; Variance 61.592; scale 0.291

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	ID	Description	Pred. No.
1	84	100.0	66	24	W13598 Monocyte chemoattract	1.06e-01
2	84	100.0	67	24	W13599 Monocyte chemoattract	1.06e-01
3	84	100.0	68	24	W13597 Monocyte chemoattract	1.06e-01
4	84	100.0	69	14	R87678 Des(2-8) MCP-1.	1.06e-01
5	84	100.0	69	24	W13596 Monocyte chemoattract	1.06e-01
6	84	100.0	76	14	R87675 (28-Asp) MCP-1.	1.06e-01
7	84	100.0	76	5	R26580 Sequence of bovine P6	1.06e-01
8	84	100.0	76	20	W09374 Monocyte chemotactic	1.06e-01
9	84	100.0	76	14	R87677 (3-Ala) MCP-1.	1.06e-01
10	84	100.0	76	1	P90292 Peptide from human gl	1.06e-01
11	84	100.0	76	30	W40175 Macrophage chemoattra	1.06e-01
12	84	100.0	76	14	R87676 (24-Arg) MCP-1.	1.06e-01
13	84	100.0	76	14	R87680 Monocyte chemotactic	1.06e-01
14	84	100.0	76	5	R28660 MCF.	1.06e-01
15	84	100.0	76	10	R53398 Sense MCP-1.	1.06e-01
16	84	100.0	76	21	W11131 Mature human monocyte	1.06e-01

17 84 100.0 77 15 R86859 Mature MCP-1. 1.06e-01
18 84 100.0 99 2 P95387 Human monocyte chemo- 1.06e-01
19 84 100.0 99 14 R73914 Human monocyte chemo- 1.06e-01
20 84 100.0 99 5 R28663 MCF. 1.06e-01
21 84 100.0 99 5 R26581 Sequence of P6 precu- 1.06e-01
22 84 100.0 99 30 W40174 Macrophage chemoattra 1.06e-01
23 84 100.0 99 13 R70800 Chemoattractant prote 1.06e-01
24 84 100.0 99 13 W22675 Drol3+ chemokine beta 2.78e-01
25 80 95.2 71 26 W22675 Chemokine MCP-4 prote 2.78e-01
26 80 95.2 75 31 W56690 Bac 3 chemokine beta1 2.78e-01
27 80 95.2 75 26 W22673 Bac 2 chemokine beta1 2.78e-01
28 80 95.2 77 26 W22672 Droll/2 chemokine bet 2.78e-01
29 80 95.2 82 24 W17665 Stem cell mobilising 2.78e-01
30 80 95.2 82 26 W22671 Bac 1 chemokine beta1 2.78e-01
31 80 95.2 98 31 W56087 Human monocyte chemo- 2.78e-01
32 80 95.2 98 28 W30191 Monocyte chemotactic 2.78e-01
33 80 95.2 98 26 W22670 Human chemokine beta1 2.78e-01
34 80 95.2 98 17 R93087 Human chemokine beta- 2.78e-01
35 80 95.2 99 2 R06398 Human MCF precursor. 2.78e-01
36 80 95.2 395 26 W23347 Novel murine CX3C 395 2.78e-01
37 80 95.2 395 28 W34308 Mouse neurotactin. 2.78e-01
38 77 91.7 73 13 R70252 Eotaxin chemoattracta 5.71e-01
39 77 91.7 82 29 W44721 Amino acid sequence o 5.71e-01
40 77 91.7 96 24 W14991 Guinea pig eosinocyte 5.71e-01
41 77 91.7 97 23 W10099 Human eotaxin. 5.71e-01
42 77 91.7 97 24 W14990 Human eosinocyte CC t 5.71e-01
43 77 91.7 97 21 W00667 Pancreas expressed ch 5.71e-01
44 77 91.7 99 13 R70801 Chemoattractant prote 5.71e-01
45 77 91.7 109 2 R24353 Cytokine encoded by c 5.71e-01

ALIGNMENTS

RESULT 1
ID W13598 standard; peptide; 66 AA.

DT 07-NOV-1997 (first entry)

DE Monocyte chemoattractant protein analogue MCP-1 (10-76).

KW Truncated monocyte chemoattractant protein-1; inhibitor;

KW receptor binding; anti inflammatory; basophil; lymphocyte; allergy;

KW chronic inflammatory disease; arthritis; arteriosclerosis;

KW lung disease.

OS Homo sapiens.

PN CA2152141-A.

PD 20-DEC-1996.

PF 19-JUN-1995; 152141.

PR 19-JUN-1995; CA-152141.

PA (LEWIS) LEWIS I.

PI Gong J, Lewis I;

DR WPI; 97-165844/16.

PT N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) - lacks MCP-1 activity and inhibits receptor binding, useful as anti-inflammatory agent

PS Disclosure: Page 5; 27pp; English.

CC The present sequence represents an analogue, MCP-1 (10-76), of monocyte chemoattractant protein-1 (MCP-1). The analogue, which lacks the

CC N-terminal amino acids 1-9 of MCP-1, acts as an antagonist of MCP-1

CC as it lacks MCP-1 biological activity and inhibits binding to a MCP-1

CC receptor. The analogue is useful as an anti-inflammatory agent to block

CC the effects of MCP-1 which is an inflammatory mediator causing migration

CC of monocytes and other cells e.g. basophils and lymphocytes into

CC inflammatory sites. MCP-1 has been implicated in allergic and chronic

CC inflammatory diseases e.g. arthritis, arteriosclerosis and several lung

CC diseases. The analogue competes more effectively with MCP-1 for binding

CC MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably

CC providing 50% inhibition of binding at a 25:1 ratio or less, compared

CC with 75:1 for prior art mutant 7ND.

SQ Sequence 66 AA;

Query Match 100.0%; Score 84; DB 24; Length 66;

Best Local Similarity 100.0%; Pred. No. 1.06e-01;

Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db 42 cadpkqkwvq 51
QY 1 CADPKQKWVQ 10

RESULT 2
ID W13599 standard; peptide; 67 AA.
AC W13599;
DT 07-NOV-1997 (first entry)
DE Monocyte chemoattractant protein analogue MCP-1 (11-76).
KW Truncated monocyte chemoattractant protein-1; inhibitor;
KW receptor binding; anti inflammatory; basophil; lymphocyte; allergy;
KW chronic inflammatory disease; arthritis; arteriosclerosis;
KW lung disease.
OS Homo sapiens.
PN CA2152141-A.
PF 19-JUN-1995; 152141.
PR 19-JUN-1995; CA-152141.
PA (LEWIS) LEWIS I.
PI Gong J, Lewis I;
DR WPI; 97-165844/16.
PT N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) -
PT lacks MCP-1 activity and inhibits receptor binding, useful as
PT anti-inflammatory agent
PS Disclosure: Page 5; 27pp; English.
CC The present sequence represents an analogue, MCP-1 (11-76), of monocyte
CC chemoattractant protein-1 (MCP-1). The analogue, which lacks the
CC N-terminal amino acids 1-10 of MCP-1, acts as an antagonist of MCP-1
CC as it lacks MCP-1 biological activity and inhibits binding to a MCP-1
CC receptor. The analogue is useful as an anti-inflammatory agent to block
CC the effects of MCP-1 which is an inflammatory mediator causing migration
CC of monocytes and other cells e.g. basophils and lymphocytes into
CC inflammation sites. MCP-1 has been implicated in allergic and chronic
CC inflammatory diseases e.g. arthritis, arteriosclerosis and several lung
CC diseases. The analogue competes more effectively with MCP-1 for binding
CC MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably
CC providing 50% inhibition of binding at a 25:1 ratio or less, compared
CC with 75:1 for prior art mutant 7ND.
SQ Sequence 67 AA;

Query Match 100.0%; Score 84; DB 24; Length 67;
Best Local Similarity 100.0%; Pred. No. 1.06e-01;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 43 cadpkqkwvq 52
QY 1 CADPKQKWVQ 10

RESULT 3
ID W13597 standard; peptide; 68 AA.
AC W13597;
DT 07-NOV-1997 (first entry)
DE Monocyte chemoattractant protein analogue MCP-1 (9-76).
KW Truncated monocyte chemoattractant protein-1; inhibitor;
KW receptor binding; anti inflammatory; basophil; lymphocyte; allergy;
KW chronic inflammatory disease; arthritis; arteriosclerosis;
KW lung disease.
OS Homo sapiens.
PN CA2152141-A.
PF 19-JUN-1995; 152141.
PR 19-JUN-1995; CA-152141.
PA (LEWIS) LEWIS I.
PI Gong J, Lewis I;
DR WPI; 97-165844/16.
PT N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) -
PT lacks MCP-1 activity and inhibits receptor binding, useful as
PT anti-inflammatory agent
PS Claim 7; Page 5; 27pp; English.
CC The present sequence represents an analogue, MCP-1 (9-76), of monocyte
CC chemoattractant protein-1 (MCP-1). The analogue, which lacks the

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CC N-terminal amino acids 1-8 of MCP-1, acts as an antagonist of MCP-1
CC as it lacks MCP-1 biological activity and inhibits binding to a MCP-1
CC receptor. The analogue is useful as an anti-inflammatory agent to block
CC the effects of MCP-1 which is an inflammatory mediator causing migration
CC of monocytes and other cells e.g. basophils and lymphocytes into
CC inflammation sites. MCP-1 has been implicated in allergic and chronic
CC inflammatory diseases e.g. arthritis, arteriosclerosis and several lung
CC diseases. The analogue competes more effectively with MCP-1 for binding
CC MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably
CC providing 50% inhibition of binding at a 25:1 ratio or less, compared
CC with 75:1 for prior art mutant 7ND.
SQ Sequence 68 AA;

Query Match 100.0%; Score 84; DB 24; Length 68;
Best Local Similarity 100.0%; Pred. No. 1.06e-01;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 44 cadpkqkwvq 53
QY 1 CADPKQKWVQ 10

RESULT 4
ID R87678 standard; protein; 69 AA.
AC R87678;
DT 21-FEB-1996 (first entry)
DE des(2-8) MCP-1.
KW monocyte chemoattractant protein; MCP-1; mutant; restenosis;
KW angiotensin.
OS Homo sapiens.
FH Key Location/Qualifiers
FT modified_site 2..3
FT /note= "amino acids 2-8 of the native protein have
FT been deleted between these residues"
FT disulfide_bond 4..29
FT disulfide_bond 5..45
PN W09513295-A1.
PD 18-MAY-1995.
PF 07-NOV-1994; U12874.
PR 12-NOV-1993; US-152301.
PA (DAND ) DANA FARBEN CANCER INST INC.
PI Rollins B, Zhang YJ;
DR WPI; 95-215051/28.
PT Human monocyte chemoattractant protein-1 (MCP-1) derivs. - are
PT capable of inhibiting the monocyte chemoattractant activity of
PT endogenous MCP-1 and can be used to treat restenosis
PS Claim 4; Page 11; 22pp; English.
CC Monocyte chemoattractant protein-1 (MCP-1) derivatives are mutated such
CC that they inhibit the monocyte chemoattractant activity of endogenous
CC MCP-1, provided that the derivative has not been modified by the
CC substitution of 28-Tyr by Leu and/or 30-Arg by Val. Preferred mutations
CC are: (1) substitution of 28 Tyr by aspartate; (2) substitution of 24 Arg
CC by Phe; (3) substitution of 3-Asp by Ala; and/or (4) deletion of amino
CC acids 2-8. The present sequence is a specifically claimed human MCP-1
CC derivative based on the parent protein disclosed in Rollins, Molecular
CC and Cellular Biology, Vol. 9, No. 11, pp. 4687-4695, Nov. 1989.
CC The peptides can be used to prevent restenosis, e.g. in patients
CC undergoing coronary artery angioplasty.
SQ Sequence 69 AA;

Query Match 100.0%; Score 84; DB 14; Length 69;
Best Local Similarity 100.0%; Pred. No. 1.06e-01;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 45 cadpkqkwvq 54
QY 1 CADPKQKWVQ 10

RESULT 5
ID W13596 standard; peptide; 69 AA.
AC W13596;
DT 07-NOV-1997 (first entry)

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M P S R E L H

(TM)

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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm
Run on: Fri Feb 4 18:03:33 2000; MasPar time 5.07 Seconds
129.098 Million cell updates/sec
Tabular output not generated.

Title: >US-09-150-813-72
Description: (1-12) from US09150813.pep
Perfect Score: 82
Sequence: 1 KACLNPASPIVK 12
Scoring table: PAM 150
Gap 15

Searched: 179066 seqs, 54579741 residues
Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: sptrembl9
1:sp.archaea 2:sp.bacteria 3:sp.fungi 4:sp.human
5:sp.invertebrate 6:sp.mammal 7:sp.mhc 8:sp.organelle
9:sp.phage 10:sp.plant 11:sp.rodent 12:sp.unclassified
13:sp.vertebrate 14:sp.virus

Statistics: Mean 23.018; Variance 24.711; scale 0.932
Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES						
Result No.	Score	Query Match	Length	DB ID	Description	Pred. No.
1	68	82.9	66	6	Q28724	PERMEABILITY FACTOR 2
2	64	78.0	103	6	Q46678	GRO.
3	62	75.6	59	6	O62764	MELANOMA GROWTH STIMUL
4	56	68.3	614	13	Q181855	SUP35 (FRAGMENT).
5	53	64.6	115	2	O83165	HYPOTHETICAL 11.8 KD P
6	51	62.2	377	5	Q92126	ALPHA-TUBULIN (FRAGMENT)
7	51	62.2	380	10	Q43568	DNA-BINDING PROTEIN (F
8	51	62.2	546	10	Q40451	DNA-BINDING PROTEIN.
9	51	62.2	983	4	Q92514	MYELOBLAST KIAA0240 (F
10	51	62.2	1296	4	Q13463	PATCHED HOMOLOG (PTC).
11	51	62.2	1434	11	O61115	PATCHED HOMOLOGUE.
12	51	62.2	1442	13	Q90693	PATCHED PROTEIN.
13	51	62.2	1447	4	Q13635	PATCHED.
14	51	62.2	2610	5	Q19482	F15B9.7 PROTEIN.
15	50	61.0	307	3	Q13713	HYPOTHETICAL 33.9 KD Z
16	50	61.0	406	14	O36366	ORF11.
17	50	61.0	830	10	O40864	1.4-ALPHA-GLUCAN BRANC
18	50	61.0	1053	3	Q74425	3-HYDROXY-3-METHYLGLUT
19	49	59.8	104	13	O73912	K60 PROTEIN PRECURSOR.
20	49	59.8	257	13	O42335	PTC1 (FRAGMENT).

21	49	59.8	268	10	065707	HYPOTHETICAL 30.0 KD P	4.25e+00
22	49	59.8	331	5	Q26047	ALPHA-TUBULIN ISOTYPE	4.25e+00
23	49	59.8	359	5	O01944	ALPHA-4-TUBULIN (FRAGM	4.25e+00
24	49	59.8	449	4	Q13748	ALPHA-TUBULIN (ALPHA-T	4.25e+00
25	49	59.8	449	13	Q42271	ALPHA-TUBULIN.	4.25e+00
26	49	59.8	450	5	O76659	TUBULIN ALPHA CHAIN.	4.25e+00
27	49	59.8	451	5	O94985	ALPHA-1 TUBULIN.	4.25e+00
28	49	59.8	451	5	O01942	ALPHA-2 TUBULIN.	4.25e+00
29	49	59.8	451	5	O94978	ALPHA-1-TUBULIN.	4.25e+00
30	49	59.8	451	5	O01941	ALPHA-TUBULIN.	4.25e+00
31	49	59.8	451	5	O26595	ALPHA-TUBULIN.	4.25e+00
32	49	59.8	451	5	Q27122	GAG PRO POL POLYPROTEI	4.25e+00
33	49	59.8	591	14	Q83351	PR160.	4.25e+00
34	49	59.8	859	14	O92804	PR160.	4.25e+00
35	49	59.8	1754	14	O56220	TYPE IIA PROCOLLAGEN (7.19e+00
36	48	58.5	119	6	O77753	ALPHA-3-TUBULIN (FRAGM	7.19e+00
37	48	58.5	443	5	O01943	HYPOTHETICAL 47.9 KD P	7.19e+00
38	48	58.5	458	2	O05591	UNKNOWN FUNCTION.	7.19e+00
39	48	58.5	501	2	Q46447	HYPOTHETICAL 63.5 KD P	7.19e+00
40	48	58.5	566	2	O84354	DSM 30040 CYCLOPROPANE	7.19e+00
41	48	58.5	603	2	Q46035	HYPOTHETICAL 70.7 KD P	7.19e+00
42	48	58.5	608	2	O84657	CYCLOSPORIN SYNTHETASE	7.19e+00
43	48	58.5	15281	3	O09164	R02.ORE264 PROTEIN.	1.21e+01
44	47	57.3	264	2	P75596	GLYCOPROTEIN E.	1.21e+01
45	47	57.3	522	14	O91334		

ALIGNMENTS

RESULT	1	PRELIMINARY;	PRT;	66	AA.
ID	Q28724				
AC	Q28724				
DT	01-NOV-1996 (TREMBLREL. 01, CREATED)				
DT	01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)				
DT	01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)				
DE	PERMEABILITY FACTOR 2 (FRAGMENT).				
GN	RPF2.				
OS	ORYCTOLAGUS CUNICULUS (RABBIT).				
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;				
OC	LAGOMORPHA; LEPORIDAE; ORYCTOLAGUS.				
RN	[1]				
RP	SEQUENCE FROM N.A.				
RC	STRAIN=NEW ZEALAND WHITE;				
RC	MEDLINE: 95129889				
RA	JOHNSON M.C., GOODMAN R.B. II, KAJIKAWA O., WONG V.A., MONGOVIN S.M.,				
RA	MARTIN T.R.;				
RT	"Cloning of two rabbit GRO homologues and their expression in				
RT	alveolar macrophages."				
RL	GENE 151:337-338(1994).				
DR	EMBL: L28933; G455343; -				
DR	PROSITE: P800471; SMALL_CYTOKINES_CXC; 1.				
DR	PFAM: PF00048; 118; 1.				
FT	NON_TER				
SQ	SEQUENCE 66 AA; 7102 MW; D4C4BC7D CRC32;				
Query Match 82.9%; Score 68; DB 6; Length 66;					
Best Local Similarity 81.8%; Pred. No. 5.90e-05;					
Matches 9; Conservative 2; Mismatches 0; Indels 0; Gaps 0;					
Db	43	ACLNPAPMVK 53			
QY	2	ACLNPASPIVK 12			
RESULT	2	PRELIMINARY;	PRT;	103	AA.
ID	O46678				
AC	O46678;				
DT	01-JUN-1998 (TREMBLREL. 06, CREATED)				
DT	01-JUN-1998 (TREMBLREL. 06, LAST SEQUENCE UPDATE)				
DT	01-AUG-1998 (TREMBLREL. 07, LAST ANNOTATION UPDATE)				
DE	GRO.				
OS	OVIS ARIES (SHEEP).				
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;				

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OC ARTIODACTYLA; RUMINANTIA; PECORA; BOVOIDEA; BOVIDAE; CAPRINAE; OVIS.
RN [1]
RP SEQUENCE FROM N.A.
RA YOSHIMURA T., MODI W.S.;
RL SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; U95814; G2735499; -.
SQ SEQUENCE 103 AA; 10820 MW; C34945B7 CRC32;

Query Match 78.0%; Score 64; DB 6; Length 103;
Best Local Similarity 80.0%; Pred. No. 7.29e-04;
Matches 8; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 81 CLNPAAPMVK 90
QY 3 CLNPASPIVK 12
||||:|:|

RESULT 3
ID O62764 PRELIMINARY; PRT; 59 AA.
AC O62764;
DT 01-AUG-1998 (TREMBLREL. 07, CREATED)
DT 01-AUG-1998 (TREMBLREL. 07, LAST SEQUENCE UPDATE)
DT 01-AUG-1998 (TREMBLREL. 07, LAST SEQUENCE UPDATE)
DE MELANOMA GROWTH STIMULATORY ACTIVITY HOMOLOG (FRAGMENT).
GN MGSA.
OS EQUUS CABALLUS (HORSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC PERISSODACTYLA; EQUIDAE; EQUUS.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=SKIN;
RA RIDER S., CHECA-CORTES M.L., JOERG H., STRANZINGER G.;
RL SUBMITTED (MAR-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; AF053497; G303533; -.
FT NON_TER 1
SQ SEQUENCE 59 AA; 6344 MW; 0C5EA8CC CRC32;

Query Match 75.6%; Score 62; DB 6; Length 59;
Best Local Similarity 63.6%; Pred. No. 2.49e-03;
Matches 7; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 36 TCLNPEAPMVK 46
QY 2 ACLNPASPIVK 12
||||:|:|

RESULT 4
ID Q91855 PRELIMINARY; PRT; 614 AA.
AC Q91855;
DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
DE SUP35 (FRAGMENT).
GN SUP35.
OS XENOPUS LAEVIS (AFRICAN CLAWED FROG).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; AMPHIBIA; BATRACHIA; ANURA;
OC MESOBATRACHIA; PIPOIDEA; PIPOIDAE; XENOPODINAE; XENOPUS.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=UNFERTILIZED EGGS;
RX MEDLINE; 8832972.
RA KUSHNIROV V.V., TER-AVANEVSKAN M.D., TELKOV M.V., SURGUCHOV A.P.,
RA SMIRNOV V.N., INGE-VECHTOMOV S.G.;
RT "Nucleotide sequence of the SUP35 (SUP35) gene of Saccharomyces cerevisiae."
RL GENE 66:45-54(1988).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=UNFERTILIZED EGGS;
RX MEDLINE; 95393983.
RA ZHOURAVLEVA G., FROLOVA L.Y., LE GOFF X., LE GUELLEC R.,
RA INGE-VECHTOMOV S.G., KISSELEV L.L., PHILIPPE M.;
RT "Termination of translation in eukaryotes is governed by two

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RT interacting polypeptide chain release factors, eRF1 and eRF3."
RL EMBO J. 14:4065-4072(1995).
DR EMBL; L37045; G976219; -.
DR PFAM; PF00009; GTP_EFTU; 1.
FT NON_TER 1
SQ SEQUENCE 614 AA; 67919 MW; 672740BD CRC32;

Query Match 68.3%; Score 56; DB 13; Length 614;
Best Local Similarity 45.5%; Pred. No. 8.81e-02;
Matches 5; Conservative 5; Mismatches 1; Indels 0; Gaps 0;

Db 20 PCLTPSAPLIK 30
QY 2 ACLNPASPIVK 12
||| |::|:|

RESULT 5
ID O83165 PRELIMINARY; PRT; 115 AA.
AC O83165;
DT 01-NOV-1998 (TREMBLREL. 08, CREATED)
DT 01-NOV-1998 (TREMBLREL. 08, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST SEQUENCE UPDATE)
DE HYPOTHETICAL 11.8 KD PROTEIN.
GN TP0128.
OS TREPONEMA PALLIDUM.
OC BACTERIA; SPIROCHAETALES; SPIROCHAETACEAE; TREPONEMA.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 98332770.
RA FRASER C.M., NORRIS S.J., WEINSTOCK G.M., WHITE O., SUTTON G.G.,
RA DODSON R., GWINN M., HICKEY E.K., CLAYTON R., KETCHUM K.A.,
RA SODERGREN E., HARDHAM J.M., MCLEOD M.P., SALZBERG S., PETERSON J.,
RA KHALAK H., RICHARDSON D., HOWELL J.K., CHIDAMBARAM M., UTTERBACK T.,
RA MCDONALD L., ARTIACH P., BOWMAN C., COTTON M.D., FUJII C., GARLAND S.,
RA HATCH B., HORST K., ROBERTS K., WATTHEY L., WEIDMAN J., SMITH H.O.,
RA VENTER J.C.;
RT "Complete Genome Sequence of Treponema pallidum, the Syphilis Spirochete."
RL SCIENCE 281:375-388(1998).
RN [2]
RP SEQUENCE FROM N.A.
RA FRASER C.M., NORRIS S.J., WEINSTOCK G.M., WHITE O., SUTTON G.G.,
RA DODSON R., GWINN M., HICKEY E.K., CLAYTON R., KETCHUM K.A.,
RA SODERGREN E., HARDHAM J.M., MCLEOD M.P., SALZBERG S., PETERSON J.,
RA KHALAK H., RICHARDSON D., HOWELL J.K., CHIDAMBARAM M., UTTERBACK T.,
RA MCDONALD L., ARTIACH P., BOWMAN C., COTTON M.D., FUJII C., GARLAND S.,
RA HATCH B., HORST K., ROBERTS K., WATTHEY L., WEIDMAN J., SMITH H.O.,
RA VENTER J.C.;
RL SUBMITTED (MAR-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; AE001198; G3322395; -.
KW HYPOTHETICAL PROTEIN.
SQ SEQUENCE 115 AA; 11763 MW; 4616268A CRC32;

Query Match 64.6%; Score 53; DB 2; Length 115;
Best Local Similarity 58.3%; Pred. No. 4.83e-01;
Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 35 RACLVPASFEVR 46
QY 1 KACLNPASPIVK 12
|||||:|:|

RESULT 6
ID P92126 PRELIMINARY; PRT; 377 AA.
AC P92126;
DT 01-MAY-1997 (TREMBLREL. 03, CREATED)
DT 01-MAY-1997 (TREMBLREL. 03, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST SEQUENCE UPDATE)
DE ALPHA-TUBULIN (FRAGMENT).
GN ATUB.
OS NOSEMA LOCUSTAE.
OC EUKARYOTA; MICROSPORIDIA; NOSEMATIDAE; NOSEMA.
RN [1]

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DR MENDEL: 16183; NICTA;2451;mn16183.
RW DNA-BINDING 546 AA; 57188 MW; 98DD1AF9 CRC32;
SQ SEQUENCE 546 AA; 57188 MW; 98DD1AF9 CRC32;

Query Match 62.2%; Score 51; DB 10; Length 546;
Best Local Similarity 54.5%; Pred. No. 1.45e+00;
Matches 6; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 514 KPCLNAPSPAI 524
QY 1 KACLNAPSPIV 11

RESULT 9
ID Q92514 PRELIMINARY; PRT; 983 AA.
AC Q92514;
DT 01-FEB-1997 (TREMBLREL. 02, CREATED)
DT 01-FEB-1997 (TREMBLREL. 02, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE MYELOBLAST KIAA0240 (FRAGMENT)
GN KIAA0240.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-BONE MARROW;
RX MEDLINE: 97191544.
RA NAGASE T., SERI N., ISHIKAWA K., OHIRA M., KAWARABAYASI Y., OHARA O.,
RA TANAKA A., KOTANI H., MIYAJIMA N., NOMURA N.;
RT "Prediction of the coding sequences of unidentified human genes. VI.
RT The coding sequences of 80 new genes (KIAA0201-KIAA0280) deduced by
RT analysis of cDNA clones from cell line KG-1 and brain.";
RL DNA RES. 3:321-329(1996).
DR MENDEL: D87077; D1013936; -.
FT NON_TER 1
SQ SEQUENCE 983 AA; 105052 MW; 7C466D59 CRC32;

Query Match 62.2%; Score 51; DB 4; Length 983;
Best Local Similarity 70.0%; Pred. No. 1.45e+00;
Matches 7; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Db 520 KKCLNOTSPI 529
QY 1 KACLNAPSPAI 10

RESULT 10
ID Q13463 PRELIMINARY; PRT; 1296 AA.
AC Q13463;
DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE PATCHED HOMOLOG (PTC).
GN PTC.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE: 96218118.
RA HAHN H., CHRISTIANSEN J., WICKING C., ZAPHIROPOULOS P.G., TOFTGARD R.,
RA CHIDAMBARAM A., GERRARD B., VORECHOVSKY I., BALE A.E.,
RA DEAN M., WAINWRIGHT B.;
RT "A mammalian patched homolog is expressed in target tissues of sonic
RT hedgehog and maps to a region associated with developmental
RT abnormalities.";
RL J. BIOL. CHEM. 271:12125-12128(1996).
DR EMBL: U43148; G1335864; -.
SQ SEQUENCE 1296 AA; 144461 MW; 8E10F149 CRC32;

Query Match 62.2%; Score 51; DB 4; Length 1296;
Best Local Similarity 66.7%; Pred. No. 1.45e+00;

DR MENDEL: 16183; NICTA;2451;mn16183.
RW DNA-BINDING 546 AA; 57188 MW; 98DD1AF9 CRC32;
SQ SEQUENCE 546 AA; 57188 MW; 98DD1AF9 CRC32;

Query Match 62.2%; Score 51; DB 5; Length 377;
Best Local Similarity 63.6%; Pred. No. 1.45e+00;
Matches 7; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 265 ACNPESQWVK 275
QY 2 ACLNPASPIVK 12

RESULT 7
ID Q43568 PRELIMINARY; PRT; 380 AA.
AC Q43568;
DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
DT 01-JAN-1999 (TREMBLREL. 09, LAST ANNOTATION UPDATE)
DE DNA-BINDING PROTEIN (FRAGMENT).
GN ATP1.
OS NICOTIANA TABACUM (COMMON TOBACCO).
OC EUKARYOTA; VIRIDIPANTAE; STREPTOPHYTA; EMBRYOPHYTA; TRACHEOPHYTA;
OC EUPHYLLIPHYTES; SPERMATOPHYTA; MAGNOLIOPHYTA; EUDICOTYLEDONS;
OC ASTERIDAE; SOLANACEAE; SOLANALES; SOLANACEAE; NICOTIANA.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN-CV. SR1; TISSUE-LEAF;
RA TJADEN G., CORUZZI G.W.;
RL PLANT CELL 1:107-118(1994).
DR EMBL: L26113; G456124; -.
DR MENDEL: 16184; NICTA;2451;mn16184.
KW DNA-BINDING.
FT NON_TER 1
SQ SEQUENCE 380 AA; 39388 MW; 60583FC0 CRC32;

Query Match 62.2%; Score 51; DB 10; Length 380;
Best Local Similarity 54.5%; Pred. No. 1.45e+00;
Matches 6; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 348 KPCLNAPSPAI 358
QY 1 KACLNAPSPIV 11

RESULT 8
ID Q40451 PRELIMINARY; PRT; 546 AA.
AC Q40451;
DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
DT 01-JAN-1999 (TREMBLREL. 09, LAST ANNOTATION UPDATE)
DE DNA-BINDING PROTEIN.
GN PABF.
OS NICOTIANA TABACUM (COMMON TOBACCO).
OC EUKARYOTA; VIRIDIPANTAE; STREPTOPHYTA; EMBRYOPHYTA; TRACHEOPHYTA;
OC EUPHYLLIPHYTES; SPERMATOPHYTA; MAGNOLIOPHYTA; EUDICOTYLEDONS;
OC ASTERIDAE; SOLANACEAE; SOLANALES; SOLANACEAE; NICOTIANA.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=XANTHI; TISSUE=STEM;
RA LAIBLE G., NATT E., SEGUIN A., DOERNER P.W., LAMB C.J.;
RL SUBMITTED (FEB-1994) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL: U06712; G555655; -.
PFAM: PF00538; linker_histone; 1.

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Matches 6; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 143 RPLNPDADP 151
 QY 1 KACLNPASP 9
 ::|||

RESULT 11
 ID Q61115 PRELIMINARY; PRT; 1434 AA.
 AC Q61115;
 DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
 DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE PATCHED HOMOLOGUE.
 GN PTCH.
 OS MUS MUSCULUS (MOUSE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
 OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 96176226.
 RA GOODRICH L.V., JOHNSON R.L., MILENKOVIC L., MCMAHON J.A., SCOTT M.P.;
 RT "Conservation of the hedgehog/patched signaling pathway from flies to
 RT mice: induction of a mouse patched gene by Hedgehog."
 RL GENES DEV. 10:301-312(1996).
 DR EMBL; U46155; G1181885;
 DR MGD; MGI:105373; PTCH.
 SQ SEQUENCE 1434 AA; 159272 MW; 69A82E46 CRC32;

Query Match 62.2%; Score 51; DB 11; Length 1434;
 Best Local Similarity 66.7%; Pred. No. 1.45e+00;
 Matches 6; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 280 RPLNPDADP 288
 QY 1 KACLNPASP 9
 ::|||

RESULT 12
 ID Q90693 PRELIMINARY; PRT; 1442 AA.
 AC Q90693;
 DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
 DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE PATCHED PROTEIN.
 GN PTCH.
 OS GALLUS GALLUS (CHICKEN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; ARCHOSAURIA; AVES;
 OC NEOGNATHAE; GALLIFORMES; PHASIANIDAE; PHASIANINAE; GALLUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 96205046.
 RA MARIKO V., SCOTT M.P., JOHNSON R.L., GOODRICH L.V., TABIN C.;
 RT "Conservation in hedgehog signaling: induction of a chicken patched
 RT homolog by Sonic hedgehog in the developing limb."
 RL DEVELOPMENT 122:1225-1233(1996).
 DR EMBL; U40074; G1335851;
 DR MGD; MGI:105373; PTCH.
 SQ SEQUENCE 1442 AA; 160576 MW; 4DA25B6D CRC32;

Query Match 62.2%; Score 51; DB 13; Length 1442;
 Best Local Similarity 66.7%; Pred. No. 1.45e+00;
 Matches 6; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 294 RPLNPDADP 302
 QY 1 KACLNPASP 9
 ::|||

RESULT 13
 ID Q13635 PRELIMINARY; PRT; 1447 AA.
 AC Q13635;
 DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
 DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)

DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE PATCHED.
 GN PTC.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
 OC CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX TISSUE-LUNG;
 RA MEDLINE; 96247324.
 RA JOHNSON R.L., ROTHMAN A.L., XIE J., GOODRICH L.V., BARE J.W.,
 RA BONIFAS J.M., QUINN A.G., MYERS R.N., COX D.R., EPSTEIN E.H. JR.,
 RA SCOTT M.P.;
 RT "Human homolog of patched, a candidate gene for the basal cell nevus
 RT syndrome."
 RL SCIENCE 272:1668-1671(1996).
 DR EMBL; U59464; G1381236;
 SQ SEQUENCE 1447 AA; 160559 MW; 6BD592C2 CRC32;

Query Match 62.2%; Score 51; DB 4; Length 1447;
 Best Local Similarity 66.7%; Pred. No. 1.45e+00;
 Matches 6; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 294 RPLNPDADP 302
 QY 1 KACLNPASP 9
 ::|||

RESULT 14
 ID Q19482 PRELIMINARY; PRT; 2610 AA.
 AC Q19482; Q23218;
 DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST SEQUENCE UPDATE)
 DT 01-AUG-1998 (TREMBLREL. 07, LAST ANNOTATION UPDATE)
 DE F15B9.7 PROTEIN.
 GN F15B9.7.
 OS CAENORHABDITIS ELEGANS.
 OC EUKARYOTA; METAZOA; NEMATODA; SECERNENTEA; RHABDITIA; RHABDITIDA;
 OC RHABDITINA; RHABDITOIDEA; RHABDITIDAE; PELODERINAE; CAENORHABDITIS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RA BAYNES C.;
 RL SUBMITTED (AUG-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 94150718.
 RA WILSON R., AINSKOUGH R., ANDERSON K., BAYNES C., BERKS M.,
 RA BONFIELD J., BURTON J., CONNELL M., COPSEY T., COOPER J., COULSON A.,
 RA CRAXTON M., DEAR S., DU Z., DURBIN R., FAVELLO A., FULTON L.,
 RA GARDNER A., GREEN P., HAWKINS T., HILLIER L., JIER M., JOHNSTON L.,
 RA JONES M., KERSHAW J., KIRSTEN J., LAISTER N., LATREILLE P.,
 RA LIGHTNING J., LLOYD C., MCMURRAY A., MORTIMORE B., O'CALLAGHAN M.,
 RA PARSONS J., PERCY C., RIFKEN L., ROOPRA A., SAUNDERS D., SHOWNKEEN R.,
 RA SWALDON N., SMITH A., SONNHAMMER E., STADEN R., SULSTON J.,
 RA THIRY-MIEG J., THOMAS K., VAUDIN M., VAUGHAN K., WATERSTON R.,
 RA WATSON A., WEINSTOCK L., WILKINSON-SPROAT J., WOHLDMAN P.;
 RT "2.2 Mb of contiguous nucleotide sequence from chromosome III of C.
 RT elegans."
 RL NATURE 368:32-38(1994).
 RN [3]
 RP SEQUENCE FROM N.A.
 RA PERCY C.;
 RL SUBMITTED (AUG-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 CC -1- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN (BY SIMILARITY).
 DR EMBL; Z78018; E1350097;
 DR EMBL; Z78013; E1350097; JOINED.
 DR EMBL; Z78013; E1345595;
 DR EMBL; Z78018; E1345595; JOINED.
 DR PROSITE; PS00232; CADHERIN; 6.
 KW CELL ADHESION; GLYCOPROTEIN; TRANSMEMBRANE; CALCIUM-BINDING; REPEAT.
 SQ SEQUENCE 2610 AA; 290075 MW; 1D187623 CRC32;

Query Match 62.2%; Score 51; DB 5; Length 2610;

Best Local Similarity 50.0%; Pred. No. 1.45e+00;
Matches 5; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

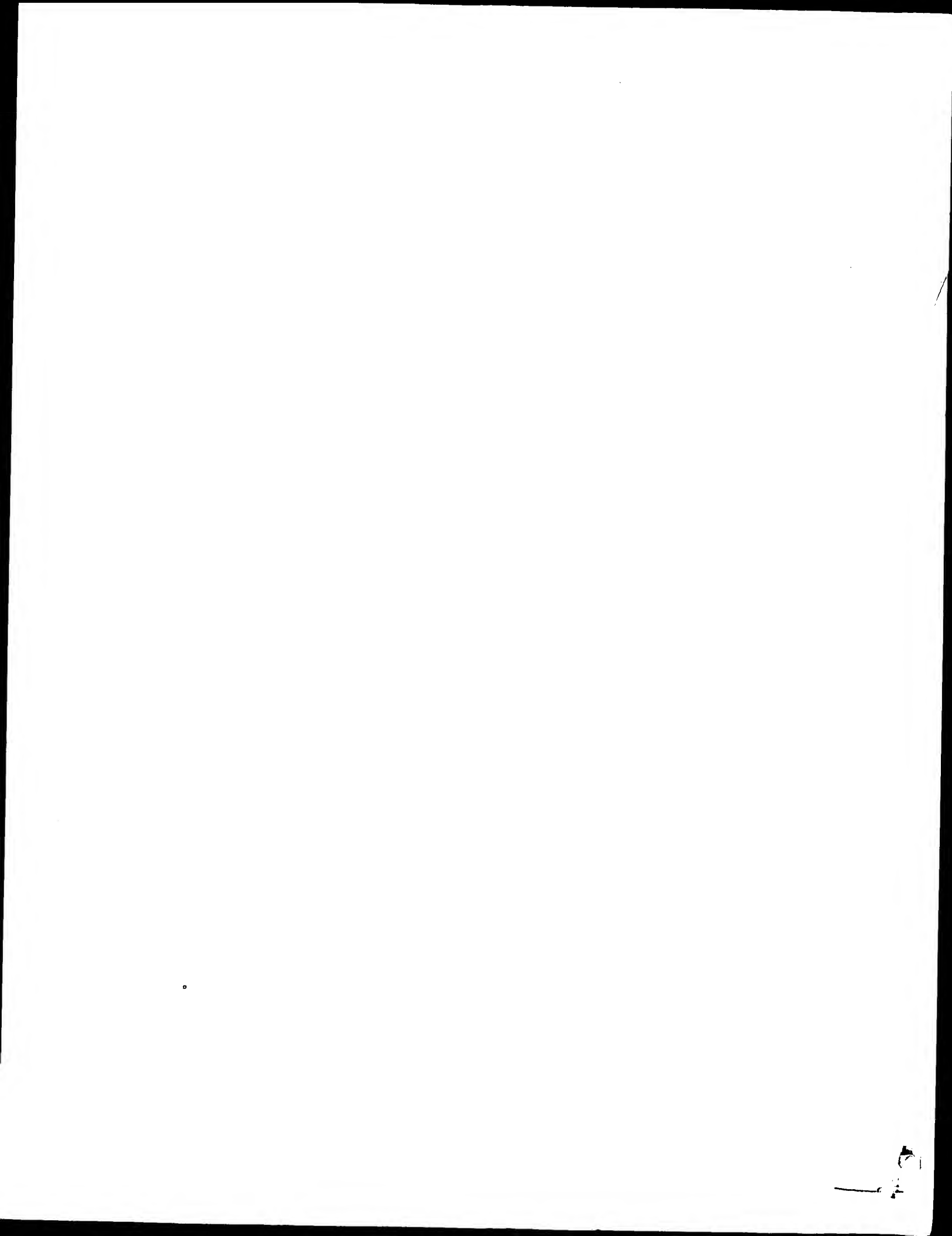
Db 59 PCLHGOPII 68
QY 2 ACLNPASPIV 11

RESULT 15
ID 013713 PRELIMINARY; PRT; 307 AA.
AC 013713;
DT 01-JUN-1998 (TREMELREL. 06, CREATED)
DT 01-JUN-1998 (TREMELREL. 06, LAST SEQUENCE UPDATE)
DT 01-JUN-1998 (TREMELREL. 06, LAST ANNOTATION UPDATE)
DE HYPOTHETICAL 33.9 KD ZINC FINGER PROTEIN C14C4.06C IN CHROMOSOME I.
GN SPAC14C4.06C.
OS SCHIZOSACCHAROMYCES POMBE (FISSION YEAST).
OC EUKARYOTA; FUNGI; ASCOMYCOTA; ARCHIASCOMYCETES;
OC SCHIZOSACCHAROMYCETALES; SCHIZOSACCHAROMYCETACEAE;
OC SCHIZOSACCHAROMYCES.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=972;
RA DEVLIN K., CHURCHER C.M., BARRELL B.G., RAJANDREAM M.A., WOOD V.;
RL SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -!- SUBCELLULAR LOCATION: NUCLEAR (POTENTIAL).
DR EMBL; Z98596; E334264; -.
KW HYPOTHETICAL PROTEIN; NUCLEAR PROTEIN; DNA-BINDING; ZINC-FINGER;
KW METAL-BINDING.
FT ZN.FING 184 199 C3H-TYPE.
SQ SEQUENCE 307 AA; 33929 MW; 7B5BE6D8 CRC32;

Query Match 61.0%; Score 50; DB 3; Length 307;
Best Local Similarity 54.5%; Pred. No. 2.50e+00;
Matches 6; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 257 KPCLNPCRFI 267
QY 1 KACLNPAPIV 11

Search completed: Fri Feb 4 18:04:29 2000
Job time : 56 secs.



DE Monocyte chemoattractant protein analogue MCP-1 (8-76).
 KW Truncated monocyte chemoattractant protein-1; inhibitor;
 KW receptor binding; anti inflammatory; basophil; lymphocyte; allergy;
 KW chronic inflammatory disease; arthritis; arteriosclerosis;
 KW lung disease.
 OS Homo sapiens.
 PN CA2152141-A.
 PD 20-DEC-1996.
 PF 19-JUN-1995; 152141.
 PR 19-JUN-1995; CA-152141.
 PA (LEWIS) LEWIS I.
 PI Gong J, Lewis I;
 DR WPI; 97-165844/16.
 DT N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) -
 PT lacks MCP-1 activity and inhibits receptor binding, useful as
 PT anti-inflammatory agent
 PS Claim 5; Page 5; 27pp; English.
 CC The present sequence represents an analogue, MCP-1 (8-76), of monocyte
 CC chemoattractant protein-1 (MCP-1). The analogue, which lacks the
 CC N-terminal amino acids 1-7 of MCP-1, acts as an antagonist of MCP-1
 CC as it lacks MCP-1 biological activity and inhibits binding to a MCP-1
 CC receptor. The analogue is useful as an anti-inflammatory agent to block
 CC the effects of MCP-1 which is an inflammatory mediator causing migration
 CC of monocytes and other cells e.g. basophils and lymphocytes into
 CC inflammatory sites. MCP-1 has been implicated in allergic and chronic
 CC inflammatory diseases e.g. arthritis, arteriosclerosis and several lung
 CC diseases. The analogue competes more effectively with MCP-1 for binding
 CC MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably
 CC providing 50% inhibition of binding at a 25:1 ratio or less, compared
 CC with 75:1 for prior art mutant 7ND.
 SQ Sequence 69 AA;

Query Match 100.0%; Score 84; DB 24; Length 69;
 Best Local Similarity 100.0%; Pred. No. 1.06e-01;
 Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 45 cadpkqkwq 54
 |||||
 QY 1 CADPRQKWQ 10

RESULT 6
 ID R87675 standard; protein: 76 AA.
 AC R87675;
 DT 21-FEB-1996 (first entry)
 DE (28-Asp) MCP-1.
 KW monocyte chemoattractant protein; MCP-1; mutant; restenosis;
 KW angioplasty.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT modified_site 28
 FT disulfide_bond 11..36
 FT disulfide_bond 12..52
 PN W09513295-A1.
 PD 18-MAY-1995.
 PF 07-NOV-1994; U12874.
 PR 12-NOV-1993; US-152301.
 PA (DAND) DANA FARRER CANCER INST INC.
 PI Rollins B, Zhang YJ;
 DR WPI; 95-215051/28.
 PT Human monocyte chemoattractant protein-1 (MCP-1) derivs. - are
 PT capable of inhibiting the monocyte chemo-attractant activity of
 PT endogenous MCP-1 and can be used to treat restenosis
 PS Claim 3; Page 11; 22pp; English.
 CC Monocyte chemoattractant protein-1 (MCP-1) derivatives are mutated such
 CC that they inhibit the monocyte chemoattractant activity of endogenous
 CC MCP-1, provided that the derivative has not been modified by the
 CC substitution of 28-Tyr by Leu and/or 30-Arg by Val. Preferred mutations
 CC are: (1) substitution of 28 Tyr by aspartate; (2) substitution of 24 Arg
 CC by Phe; (3) substitution of 3-Asp by Ala; and/or (4) deletion of amino
 CC acids 2-8. The present sequence is a specifically claimed human MCP-1
 CC derivative based on the parent protein disclosed in Rollins, Molecular

CC and Cellular Biology, Vol. 9, No. 11, pp. 4687-4695, Nov. 1989.
 CC The peptides can be used to prevent restenosis, e.g. in patients
 CC undergoing coronary artery angioplasty.
 SQ Sequence 76 AA;

Query Match 100.0%; Score 84; DB 14; Length 76;
 Best Local Similarity 100.0%; Pred. No. 1.06e-01;
 Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 52 cadpkqkwq 61
 |||||
 QY 1 CADPRQKWQ 10

RESULT 7
 ID R26580 standard; Protein: 76 AA.
 AC R26580;
 DT 28-JAN-1993 (first entry)
 DE Sequence of bovine P6 protein.
 KW Monocyte chemoattractant; bovine P6-derivative; thrombosis; tumour;
 KW inflammation therapy.
 OS Bos taurus.
 PN DE4125251-C.
 PD 03-SEP-1992.
 PF 31-JUL-1991; 125251.
 PR 31-JUL-1991; DE-125251.
 PA (SCHA-) SCHAPER & BRUEMMER GMBH & CO KG.
 PI Gramm W, Lins E;
 DR WPI; 92-293438/36.
 PT Drug containing a bovine protein homologous to human MCP-1 - for
 PT treating inflammation, tumours, thrombosis, and immune reactions,
 PT also for diagnosis
 PS Claim 1; Page 3; 6pp; German.
 CC Poly(A)+RNA from bull seminal vesicles was used to prepare a cDNA in
 CC the expression vector lambda gt11. 1.5 x 10(5) cDNA clones were
 CC screened with a polyclonal anti-p6 antiserum of monospecific
 CC immunoglobulin G and six positives were identified. The insert of a
 CC suitable cDNA clone, pH42, was cloned into pUC18 and sequenced.
 CC pH42 encodes the 11,114 Da precursor of P6. It is called Monocyte
 CC Chemoattractant (bmCP-1), which is a homologue of human (h)MCP-1.
 CC There is 72% overall AA sequence homology to hMCP-1 with the signal
 CC peptide showing 100% and the central region showing 89% homology.
 SQ Sequence 76 AA;

Query Match 100.0%; Score 84; DB 5; Length 76;
 Best Local Similarity 100.0%; Pred. No. 1.06e-01;
 Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 52 cadpkqkwq 61
 |||||
 QY 1 CADPRQKWQ 10

RESULT 8
 ID W09374 standard; Protein: 76 AA.
 AC W09374;
 DT 21-MAR-1997 (first entry)
 DE Monocyte chemotactic protein 1.
 KW Human; monocyte chemoattractant protein; antisense; inhibition;
 KW mononuclear cell; lymphocyte; macrophage; smooth muscle cell;
 KW vascular restenosis.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT misc_difference 1 /note= "encoded by codon CAG"
 FT misc_difference 51 /note= "encoded by codon AUG"
 FT misc_difference 65 /note= "encoded by codon CAC"
 FT US5571713-A.
 PN 05-NOV-1996.
 PD 22-OCT-1992; 965678.
 PR 22-OCT-1992; US-965678.

PR 27-MAY-1994; US-250958.
 PA (UNMI) UNIV MICHIGAN.
 PI Kunkel SL, Lyle LR, Strieter RM;
 DR WPI; 96-505405/50.
 DR N-PSDB; T48092.
 PT Anti-sense Monocyte Chemotactic Protein-1 oligo:nucleotide(s) -
 PT useful for therapy or diagnosis of restenosis, etc.
 PS Disclosure: Column 13-14; 16pp; English.
 CC This is the amino acid sequence of the C-C chemokine family. MCP-1 is a potent
 CC stimulator of monocyte chemotaxis and is produced by injured vascular
 CC smooth cells thus attracting monocytes and macrophages which infiltrate
 CC the injured area and release growth factor. This causes proliferation of
 CC the vascular smooth cells resulting in restenosis. The gene sequence can
 CC be used to generate antisense sequences e.g. T48093-7, which can be used
 CC to inhibit in vitro MCP-1 prodn. by mononuclear cells e.g. lymphocytes or
 CC macrophages, or smooth muscle cells, esp. in order to prevent vascular
 CC restenosis.
 SQ Sequence 76 AA;

Query Match 100.0%; Score 84; DB 20; Length 76;
 Best Local Similarity 100.0%; Pred. No. 1.06e-01;
 Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 52 cadpkqkwvq 61
 |||||
 QY 1 CADPKQKWVQ 10

RESULT 9
 ID R87677 standard; protein; 76 AA.
 AC R87677;
 DT 21-FEB-1996 (first entry)
 DE (3-Ala) MCP-1.
 KW monocyte chemoattractant protein; MCP-1; mutant; restenosis;
 KW angioplasty.
 OS Homo sapiens.
 FH Key
 FT modified_site 3
 FT /note= "Asp in the native sequence is replaced by Ala"
 FT disulfide_bond 11..36
 FT disulfide_bond 12..52
 PN W09513295-Al.
 PD 18-MAY-1995.
 PF 07-NOV-1994; U12874.
 PR 12-NOV-1993; US-152301.
 PA (DAND) DANA FARBER CANCER INST INC.
 PI Rollins B, Zhang JY;
 DR WPI; 95-215051/28.
 PT Human monocyte chemo-attractant protein-1 (MCP-1) derivs. - are
 PT capable of inhibiting the monocyte chemo-attractant activity of
 PT endogenous MCP-1 and can be used to treat restenosis
 PS Claim 6; Page 11; 22pp; English.
 CC Monocyte chemoattractant protein-1 (MCP-1) derivatives are mutated such
 CC that they inhibit the monocyte chemoattractant activity of endogenous
 CC MCP-1, provided that the derivative has not been modified by the
 CC substitution of 28-Tyr by Leu and/or 30-Arg by Val. Preferred mutations
 CC are: (1) substitution of 28 Tyr by aspartate; (2) substitution of 24 Arg
 CC by Phe; (3) substitution of 3-Asp by Ala; and/or (4) deletion of amino
 CC acids 2-8. The present sequence is a specifically claimed human MCP-1
 CC derivative based on the parent protein disclosed in Rollins, Molecular
 CC and Cellular Biology, Vol. 9, No. 11, pp. 4687-4695, Nov. 1989.
 CC The peptides can be used to prevent restenosis, e.g. in patients
 CC undergoing coronary artery angioplasty.
 SQ Sequence 76 AA;

Query Match 100.0%; Score 84; DB 14; Length 76;
 Best Local Similarity 100.0%; Pred. No. 1.06e-01;
 Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 52 cadpkqkwvq 61
 |||||
 QY 1 CADPKQKWVQ 10

RESULT 10
 ID P90292 standard; peptide; 76 AA.
 AC P90292;
 DT 17-JAN-1990 (first entry)
 DE Peptide from human glioma cell line U-105MG.
 KW Glioma; leucocyte; chemotaxis; neoplasms.
 OS Human.
 FH Key
 FT modified_site 1
 FT Location/Qualifiers
 FT /label= OTHER
 FT /note= "pyroglutamic acid"
 PN US7304234-A.
 PD 20-JUL-1989.
 PF 31-JAN-1989; 030423.
 PR 31-JAN-1989; US-304234.
 PA (USSH) US Dept. of Health and Human.
 PI Yoshimura T, Robinson E; Appella E; Leonard E.
 DR WPI; 89-263501/36.
 PT New peptide with specific chemotactic activity for monocytes - isolated
 PT from glioma or leucocyte cells, useful for treating infections and
 PT neoplasms.
 PS Disclosure; page 3; 46pp; English.
 CC Peptide is derived from glioma cell line U-105MG (ATCC CRL9932) or from
 CC leukocytes and has mol. wt. 8400. Used to treat infections and neoplasms.
 SQ Sequence 76 AA;

Query Match 100.0%; Score 84; DB 1; Length 76;
 Best Local Similarity 100.0%; Pred. No. 1.06e-01;
 Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 52 cadpkqkwvq 61
 |||||
 QY 1 CADPKQKWVQ 10

RESULT 11
 ID W40175 standard; Protein; 76 AA.
 AC W40175;
 DT 01-JUL-1998 (first entry)
 DE Macrophage chemoattractant peptide designated GDCF-2.
 KW Monocyte chemoattractant peptide; MCP; MCP-1; treatment; neoplasm;
 KW infection; human; monocyte receptor; chemotactic response; inflammation;
 KW monocyte infiltration.
 OS Homo sapiens.
 FH Key
 FT modified_site 1
 FT Location/Qualifiers
 FT /note= "pyroglutamic acid"
 PN US5714578-A.
 PD 03-FEB-1998.
 PF 06-JUN-1995; 466280.
 PR 30-MAR-1989; US-330446.
 PR 31-JAN-1989; US-304234.
 PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
 PI Appella E, Leonard EJ, Robinson EA, Yoshimura T;
 DR WPI; 98-129909/12.
 PT Peptide with chemotactic activity for monocytes - from human
 PT neocytes or glioma cells, useful for treating infections and
 PT neoplasms
 PS Claim 1; Column 27; 21pp; English.
 CC The present sequence represents a monocyte chemoattractant peptide (MCP)
 CC designated GDCF-2. MCPs can be isolated from human glioma cell line
 CC U-105MG (e.g. present sequence) and peripheral blood mononuclear
 CC leukocytes. MCPs are used for the treatment of neoplasms and infections
 CC in humans. Short peptides derived from MCPs can be screened to identify
 CC those that can bind to the monocyte receptor without stimulating a
 CC chemotactic response. These are potentially useful for treating a
 CC inflammation associated with monocyte infiltration.
 SQ Sequence 76 AA;

Query Match 100.0%; Score 84; DB 30; Length 76;
 Best Local Similarity 100.0%; Pred. No. 1.06e-01;

Sat Feb 5 12:04:54 2000

CC potent effect on skin wounds and ulcers. The present sequence is human
 CC MCAF, the activity of which is exemplified as the new remedy.

SQ Sequence 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 52 cadpkqkwvq 61
 | | | | | | | | | |
 QY 1 CADPKQKWVQ 10

RESULT 12

ID R87676 standard; protein; 76 AA.
 AC R87676;
 DT 21-FEB-1996 (first entry)
 DE (24-Arg) MCP-1.
 KW monocyte chemoattractant protein; MCP-1; mutant; restenosis;
 KW angioplasty.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT modified_site 24
 FT /note= "Arg in the native sequence is replaced by Phe"
 FT disulfide_bond 11..36
 FT disulfide_bond 12..52
 PN WO9513295-A1.
 PD 18-MAY-1995.
 PF 07-NOV-1994; U12874.
 PR 12-NOV-1993; US-152301.
 PA (DAND) DANA FARMER CANCER INST INC.
 PI Rollins B, Zhang YJ;
 DR WPI: 95-215051/28.
 PT Human monocyte chemo-attractant protein-1 (MCP-1) derivs. - are
 PT capable of inhibiting the monocyte chemo-attractant activity of
 PT endogenous MCP-1 and can be used to treat restenosis
 PS Claim 5; Page 11; 22pp; English.
 CC Monocyte chemoattractant protein-1 (MCP-1) derivatives are mutated such
 CC that they inhibit the monocyte chemo-attractant activity of endogenous
 CC MCP-1, provided that the derivative has not been modified by the
 CC substitution of 28-Tyr by Leu and/or 30-Arg by Val. Preferred mutations
 CC are: (1) substitution of 28 Tyr by aspartate; (2) substitution of 24 Arg
 CC by Phe; (3) substitution of 3-Asp by Ala; and/or (4) deletion of amino
 CC acids 2-8. The present sequence is a specifically claimed human MCP-1
 CC derivative based on the parent protein disclosed in Rollins, Molecular
 CC and Cellular Biology, Vol. 9, No. 11, pp. 4697-4695, Nov. 1989.
 CC The peptides can be used to prevent restenosis, e.g. in patients
 CC undergoing coronary artery angioplasty.
 SQ Sequence 76 AA;

Query Match 100.0%; Score 84; DB 14; Length 76;
 Best Local Similarity 100.0%; Pred. No. 1.06e-01;
 Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 52 cadpkqkwvq 61
 | | | | | | | | | |
 QY 1 CADPKQKWVQ 10

RESULT 13

ID R87680 standard; protein; 76 AA.
 AC R87680;
 DT 05-MAR-1996 (first entry)
 DE Monocyte chemoattractant activating factor for use as wound remedy.
 KW monocyte chemoattractant activating factor; MCAF; wound remedy.
 OS Homo sapiens.
 PN WO9507710-A1.
 PD 23-MAR-1995.
 PF 13-SEP-1994; J01512.
 PR 13-SEP-1993; JP-227385.
 PA (TORA) TORAY IND INC.
 PI Matsushima K, Naruto M;
 DR WPI: 95-131181/17.
 PT Wound treatment using monocyte chemoattractant factor - has potent
 PT therapeutic effect on skin wounds and ulcers
 PS Disclosure: Page 12; 22pp; Japanese.
 CC The invention relates to a new remedy for curing wounds which, instead
 CC of comprising a growth factor, comprises a monocyte chemoattractant
 CC activating factor (MCAF) or its variants or derivatives. The factor has

Query Match 100.0%; Score 84; DB 14; Length 76;
 Best Local Similarity 100.0%; Pred. No. 1.06e-01;
 Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 52 cadpkqkwvq 61
 | | | | | | | | | |
 QY 1 CADPKQKWVQ 10

RESULT 14

ID R28660 standard; protein; 76 AA.
 AC R28660;
 DT 24-MAR-1993 (first entry)
 DE MCF.
 KW plasmid; monocyte chemotactic factor; MCF; translation;
 KW termination; terminator; initiation; ribosome binding site;
 KW RBS; promoter; tryptophan; repressor.
 OS Synthetic.
 PN WO9219737-A.
 PD 12-NOV-1992.
 PR 27-APR-1992; J00550.
 PR 09-MAY-1991; JP-135950.
 PA (DAIN) DAINIPPON PHARM CO LTD.
 PI Fukui T, Matsuo N, Yamada M, Yamagishi J;
 DR WPI: 92-398864/48.
 DR N-PSDB; Q30745-46.
 PT Prodn. of polypeptide(s) having monocyte chemotactic activity -
 PT using expression plasmids with E. coli elements and specific
 PT E.coli strains
 PS Claim 1; Page 48 + Page 36; 56pp; English.
 CC An expression plasmid, PHM483, for producing MCF(76) consisting
 CC of 76 amino acids was constructed. The prod. can be used for e.g.
 CC treating bacterial infectious diseases.
 SQ Sequence 76 AA;

Query Match 100.0%; Score 84; DB 5; Length 76;
 Best Local Similarity 100.0%; Pred. No. 1.06e-01;
 Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 52 cadpkqkwvq 61
 | | | | | | | | | |
 QY 1 CADPKQKWVQ 10

RESULT 15

ID R53398 standard; protein; 76 AA.
 AC R53398;
 DT 15-DEC-1994 (first entry)
 DE Sense MCP-1.
 KW Antisense; RNA; DNA; monocyte chemotactic protein-1; MCP-1;
 KW radionuclide; vascular restenosis; alpha; beta; emitting isotope;
 KW diagnosis; monocytes; vascular injury.
 OS Mammalian.
 FH Key Location/Qualifiers
 FT misc_difference 1 /note= "Unspecified amino acid"
 FT WO9409128-A.
 PN 28-APR-1994.
 PF 20-OCT-1993; U10074.
 PR 22-OCT-1992; US-965678.
 PA (MLCW) MALLINCKRODT MEDICAL INC.
 PI Lyle LR;
 DR WPI: 94-151314/18.
 PT Anti-sense monocyte chemotactic protein-1 oligonucleotide(s) and
 PT peptide(s) - is used for inhibiting, treating or imaging areas of
 PT vascular restenosis or potential restenosis
 PS Disclosure: Page 5; 42pp; English.
 CC The sequences given in R53398-99 represent sense and antisense
 CC monocyte chemotactic protein-1 (MCP-1) respectively. These

CC oligonucleotides may be labelled with a radionuclide and use
CC therapeutically for the treatment of vascular restenosis.
CC Radiolabelled antisense MCP-1 compounds may be constructed using high
CC energy alpha or beta emitting isotopes rather than the gamma
CC emitters customarily used for diagnostic purposes. Antisense MCP-1
CC compounds inactivate MCP-1 or inhibit production of MCP-1 so that
CC monocytes are not attracted to the area of vascular injury and
CC proliferation of vascular cells is inhibited.
SQ Sequence 76 AA;

Query Match 100.0%; Score 84; DB 10; Length 76;
Best Local Similarity 100.0%; Pred. No. 1.06e-01;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Db 52 cadpdkkwq 61
Qy 1 CADPRQRWVQ 10
|||||

Search completed: Fri Feb 4 16:58:32 2000
Job time : 20 secs.

SKA-2000 Comparison A

DE Monocyte chemoattractant protein analogue MCP-1 (8-76).
KW Truncated monocyte chemoattractant protein-1; inhibitor;
KW receptor binding; anti inflammatory; basophil; lymphocyte; allergy;
KW chronic inflammatory disease; arthritis; arteriosclerosis;
KW lung disease.
OS Homo sapiens.
PN CA2152141-A.
PD 20-DEC-1996.
PF 19-JUN-1995; 152141.
PR 19-JUN-1995; CA-152141.
PA (LEWIS) LEWIS I.
PI Gong J, Lewis I;
DR WPI; 97-165844/16.
PT N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) -
PT lacks MCP-1 activity and inhibits receptor binding, useful as
PT anti-inflammatory agent
PT Claim 5; Page 5; 27pp; English.
PS The present sequence represents an analogue, MCP-1 (8-76), of monocyte
CC chemoattractant protein-1 (MCP-1). The analogue, which lacks the
CC N-terminal amino acids 1-7 of MCP-1, acts as an antagonist of MCP-1
CC as it lacks MCP-1 biological activity and inhibits binding to a MCP-1
CC receptor. The analogue is useful as an anti-inflammatory agent to block
CC the effects of MCP-1 which is an inflammatory mediator causing migration
CC of monocytes and other cells e.g. basophils and lymphocytes into
CC inflammation sites. MCP-1 has been implicated in allergic and chronic
CC inflammatory diseases e.g. arthritis, arteriosclerosis and several lung
CC diseases. The analogue competes more effectively with MCP-1 for binding
CC MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably
CC providing 50% inhibition of binding at a 25:1 ratio or less, compared
CC with 75:1 for prior art mutant 7ND.
SQ Sequence 69 AA;
Query Match 100.0%; Score 84; DB 24; Length 69;
Best Local Similarity 100.0%; Pred. No. 1.06e-01;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Db 45 cadpkqkvqv 54
QY 1 CADPKQKVVQ 10
RESULT 6
ID R87675 standard; protein; 76 AA.
AC R87675;
DT 21-FEB-1996 (first entry)
DE (28-Asp) MCP-1.
KW monocyte chemoattractant protein; MCP-1; mutant; restenosis;
KW angioplasty.
OS Homo sapiens.
FH Key
FT modified_site 28
FT Location/Qualifiers
FT /note= "Tyr in the native sequence is replaced by Asp"
FT disulfide_bond 11..36
FT disulfide_bond 12..52
FN W09513295-A1.
PD 18-MAY-1995.
PF 07-NOV-1993; U12874.
PR 12-NOV-1993; US-152301.
PA (DAND) DANA FARBER CANCER INST INC.
PI Rollins B, Zhang YJ;
DR WPI; 95-215051/28.
PT Human monocyte chemoattractant protein-1 (MCP-1) derivs. - are
PT capable of inhibiting the monocyte chemoattractant activity of
PT endogenous MCP-1 and can be used to treat restenosis
PS Claim 3; Page 11; 22pp; English.
CC Monocyte chemoattractant protein-1 (MCP-1) derivatives are mutated such
CC that they inhibit the monocyte chemoattractant activity of endogenous
CC MCP-1. Provided that the derivative has not been modified by the
CC substitution of 28-Tyr by Leu and/or 30-Arg by Val. Preferred mutations
CC are: (1) substitution of 28-Tyr by aspartate; (2) substitution of 24 Arg
CC by Phe; (3) substitution of 3-Asp by Ala; and/or (4) deletion of amino
CC acids 2-8. The present sequence is a specifically claimed human MCP-1
CC derivative based on the parent protein disclosed in Rollins, Molecular

CC and Cellular Biology, Vol. 9, No. 11, pp. 4687-4695, Nov. 1989.
CC The peptides can be used to prevent restenosis, e.g. in patients
CC undergoing coronary artery angioplasty.

SQ Sequence 76 AA;

Query Match 100.0%; Score 84; DB 14; Length 76;

Best Local Similarity 100.0%; Pred. No. 1.06e-01;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 52 cadpkqkvqv 61

QY 1 CADPKQKVVQ 10

RESULT 7

ID R26580 standard; protein; 76 AA.

AC R26580;

DT 28-JAN-1993 (first entry)

DE Sequence of bovine P6 protein.

KW Monocyte chemoattractant; bovine P6-derivative; thrombosis; tumour;

KW Inflammation therapy.

OS Bos taurus.

PN DE4125251-C.

PD 03-SEP-1992.

PF 31-JUL-1991; 125251.

PR 31-JUL-1991; DE-125251.

PA (SCHAE-) SCHAEFER & BRUEMME GMBH & CO KG.

PI Gram W, Lins E;

DR WPI; 92-293438/36.

PT Drug containing a bovine protein homologous to human MCP-1 - for

PT treating inflammation, tumours, thrombosis, and immune reactions,

PT also for diagnosis

PS Claim 1; Page 3; 6pp; German.

CC Poly(A+)RNA from bull seminal vesicles was used to prepare a cDNA in

CC the expression vector lambda gtl1. 1.5 x 10(5) cDNA clones were

CC screened with a polyclonal anti-P6 antiserum of monospecific

CC immunoglobulin G and six positives were identified. The insert of a

CC suitable cDNA clone, p42, was cloned into pUC18 and sequenced.

CC p42 encodes the 11,114 Da precursor of P6. It is called Monocyte

CC Chemoattractant (MCP-1) which is a homologue of human (h)MCP-1.

CC There is 72% overall AA sequence homology to hMCP-1 with the signal

CC peptide showing 100% and the central region showing 89% homology.

SQ Sequence 76 AA;

Query Match 100.0%; Score 84; DB 5; Length 76;

Best Local Similarity 100.0%; Pred. No. 1.06e-01;

Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 52 cadpkqkvqv 61

QY 1 CADPKQKVVQ 10

RESULT 8

ID W09374 standard; protein; 76 AA.

AC W09374;

DT 21-NAR-1997 (first entry)

DE Monocyte chemotactic protein 1.

KW Human; monocyte chemoattractant protein; antisense; inhibition;

KW mononuclear cell; lymphocyte; macrophage; smooth muscle cell;

KW vascular restenosis.

OS Homo sapiens.

FH Key

FT misc_difference 1

FT /note= "encoded by codon CAG"

FT misc_difference 51

FT /note= "encoded by codon AUG"

FT misc_difference 65

FT /note= "encoded by codon CAC"

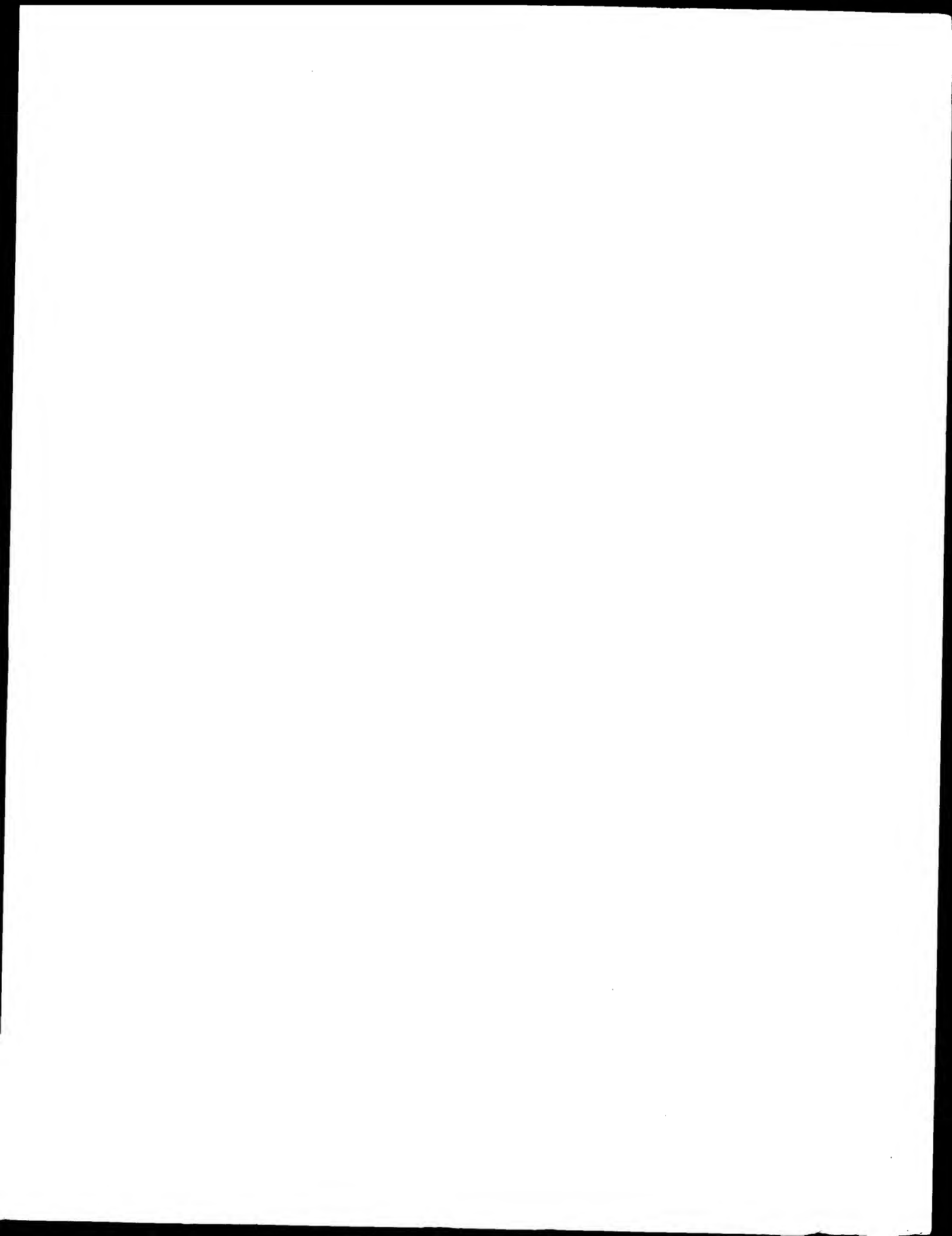
US5571713-A.

PN 05-NOV-1996.

PD 23-OCT-1992; 965678.

PF 23-OCT-1992; US-965678.

PR 23-OCT-1992; US-965678.



WPI; 95-215051/28.

Human monocyte chemo-attractant protein-1 (MCP-1) derivs. - are capable of inhibiting the monocyte chemo-attractant activity of endogenous MCP-1 and can be used to treat restenosis

Claim 3; Page 11; 22pp; English.

Monocyte chemoattractant protein-1 (MCP-1) derivatives are mutated such that they inhibit the monocyte chemoattractant activity of endogenous MCP-1 provided that the derivative has not been modified by the substitution of 28-Tyr by Leu and/or 30-Arg by Val. Preferred mutations are: (1) substitution of 28 Tyr by aspartate; (2) substitution of 24 Arg by Phe; (3) substitution of 3-Asp by Ala; and/or (4) deletion of amino acids 2-8. The present sequence is a specifically claimed human MCP-1 derivative based on the parent protein disclosed in Rollin, Molecular

[illegible]

W P E R L H (TM)

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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 16:59:22 2000; MasPar time 2.48 Seconds
Tabular output not generated. 114.038 Million cell updates/sec

Title: >US-09-150-813-7
Description: (1-10) from US09150813.pep
Perfect Score: 84
Sequence: 1 CADPKQKWQ 10

Scoring table: PAM 150
Gap 15

Searched: 77977 seqs, 28268293 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: swiss-prot37
1:swissprot

Statistics: Mean 24.651; Variance 31.983; scale 0.771

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description	Pred. No.
1	84	100.0	99	1	MCPI_HUMAN	MONOCYTE CHEMOTACTIC P
2	84	100.0	99	1	MCPA_BOVIN	MONOCYTE CHEMOTACTIC P
3	84	100.0	99	1	MCP2_BOVIN	MONOCYTE CHEMOTACTIC P
4	84	100.0	101	1	MCPI_CANFA	MONOCYTE CHEMOTACTIC P
5	84	100.0	125	1	MCPI_RABIT	MONOCYTE CHEMOTACTIC P
6	83	98.8	99	1	MCPI_PIG	MONOCYTE CHEMOTACTIC P
7	80	95.2	98	1	EOTA_HUMAN	EOTAXIN PRECURSOR (EOS
8	77	91.7	96	1	EOTA_CAVPO	EOTAXIN PRECURSOR (EOS
9	77	91.7	97	1	EOTA_HUMAN	EOTAXIN PRECURSOR (EOS
10	77	91.7	97	1	EOTA_RAT	EOTAXIN PRECURSOR (EOS
11	77	91.7	97	1	EOTA_MOUSE	EOTAXIN PRECURSOR (EOS
12	77	91.7	99	1	MCP3_HUMAN	MONOCYTE CHEMOTACTIC P
13	77	91.7	99	1	MCP2_PIG	MONOCYTE CHEMOTACTIC P
14	77	91.7	120	1	MCPI_CAVPO	MONOCYTE CHEMOTACTIC P
15	73	86.9	92	1	MILA_RAT	MACROPHAGE INFLAMMATOR
16	73	86.9	101	1	IL8_SHEEP	INTERLEUKIN-8 PRECURSOR
17	73	86.9	101	1	IL8_RABIT	INTERLEUKIN-8 PRECURSOR
18	73	86.9	101	1	IL8_CANFA	INTERLEUKIN-8 PRECURSOR
19	73	86.9	103	1	IL8_PIG	INTERLEUKIN-8 PRECURSOR
20	73	86.9	104	1	MCP5_MOUSE	MONOCYTE CHEMOTACTIC P
21	71	84.5	89	1	MIP4_HUMAN	MACROPHAGE INFLAMMATOR
22	71	84.5	99	1	MCP2_HUMAN	MONOCYTE CHEMOTACTIC P
23	70	83.3	101	1	IL8_BOVIN	INTERLEUKIN-8 PRECURSOR

ALIGNMENTS

RESULT	1	70	83.3	101	1	IL8_CAVPO	1.00e-03
ID	MCPI_HUMAN	STANDARD;	PRT;	99	AA.	INTERLEUKIN-8 PRECURSOR	1.00e-03
AC	P13500;					MONOCYTE CHEMOTACTIC P	1.68e-03
DT	01-JAN-1990 (REL. 13, CREATED)					MONOCYTE CHEMOTACTIC P	1.68e-03
DT	01-JAN-1990 (REL. 13, LAST SEQUENCE UPDATE)					STROMAL CELL-DERIVED F	4.70e-03
DT	15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)					STROMAL CELL-DERIVED F	4.70e-03
DE	MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1) (MONOCYTE CHEMOTACTIC					STROMAL CELL-DERIVED F	4.70e-03
DE	AND ACTIVATING FACTOR) (MCAF) (MONOCYTE SECRETORY PROTEIN JE)					STROMAL CELL-DERIVED F	4.70e-03
DE	(MONOCYTE CHEMOATTRACTANT PROTEIN 1) (HC11) (SMALL INDUCIBLE CYTOKINE					MACROPHAGE INFLAMMATOR	4.70e-03
DE	A2).					INTERLEUKIN-8 PRECURSOR	4.70e-03
GN	SCYA2 OR MCP1.					T-CELL SPECIFIC RANTES	7.81e-03
OS	HOMO SAPIENS (HUMAN).					MACROPHAGE INFLAMMATOR	7.81e-03
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;					T-CELL SPECIFIC RANTES	7.81e-03
OC	PRIMATES; CATARRHINI; HOMINIDAE; HOMO.					MACROPHAGE INFLAMMATOR	7.81e-03
RN	[1]					CHEMOKINE CC-1 PRECURS	1.29e-02
RP	SEQUENCE FROM N.A.					CHEMOKINE CC-3 PRECURS	1.29e-02
RA	FURUTANI Y., NOMURA H., NOTAKE M., OYAMADA Y., FUKUI T., YAMADA M.,					MACROPHAGE INFLAMMATOR	2.13e-02
RA	LARSEN C.G., OPPENHEIM J.J., MATSUSHIMA K.;					MACROPHAGE INFLAMMATOR	2.13e-02
RT	"Cloning and sequencing of the cDNA for human monocyte chemotactic					MACROPHAGE INFLAMMATOR	2.13e-02
RT	and activating factor (MCAF).";					MACROPHAGE INFLAMMATOR	2.13e-02
RL	BIOCHEM. BIOPHYS. RES. COMMUN. 159:249-255(1989).					MACROPHAGE INFLAMMATOR	2.13e-02
RN	[2]					MACROPHAGE INFLAMMATOR	2.13e-02
RP	SEQUENCE FROM N.A.					MACROPHAGE INFLAMMATOR	2.13e-02
RA	ROLLINS B.J., STIER P., ERNST T., WONG G.G.;					MACROPHAGE INFLAMMATOR	2.13e-02
RT	"The human homolog of the JE gene encodes a monocyte secretory					MACROPHAGE INFLAMMATOR	2.13e-02
RL	protein.";					MACROPHAGE INFLAMMATOR	2.13e-02
RN	[3]					MACROPHAGE INFLAMMATOR	2.13e-02
RP	SEQUENCE FROM N.A.					MACROPHAGE INFLAMMATOR	2.13e-02
RA	YOSHIMURA T., YUHKI N., MOORE S.K., APPELLA E., LERMAN M.I.,					MACROPHAGE INFLAMMATOR	2.13e-02
RT	"Human monocyte chemoattractant protein-1 (MCP-1). Full-length cDNA					MACROPHAGE INFLAMMATOR	2.13e-02
RT	cloning, expression in mitogen-stimulated blood mononuclear					MACROPHAGE INFLAMMATOR	2.13e-02
RL	leukocytes, and sequence similarity to mouse competence gene JE.";					MACROPHAGE INFLAMMATOR	2.13e-02
RN	[4]					MACROPHAGE INFLAMMATOR	2.13e-02
RP	SEQUENCE FROM N.A.					MACROPHAGE INFLAMMATOR	2.13e-02
RA	SHY Y.J., LI Y.S., KOLATTUKUDY P.E.;					MACROPHAGE INFLAMMATOR	2.13e-02
RT	"Structure of human monocyte chemotactic protein gene and its					MACROPHAGE INFLAMMATOR	2.13e-02
RL	regulation by TPA.";					MACROPHAGE INFLAMMATOR	2.13e-02
RN	[5]					MACROPHAGE INFLAMMATOR	2.13e-02
RP	SEQUENCE FROM N.A.					MACROPHAGE INFLAMMATOR	2.13e-02

RX MEDLINE; 91207938.
RA CHANG H.C., HSU F., FREEMAN G.J., GRIFFIN J.D., REINHERZ E.L.;
RT "Cloning and expression of a gamma-interferon-inducible gene in
monocytes: a new member of a cytokine gene family.";
INT. IMMUNOL. 1:388-399(1989).
[6]
RN SEQUENCE FROM N.A.
RP MEDLINE; 94150478.
RX LI Y.S., SHY Y.J., WRIGHT J.G., VALENTE A.J., CORNHILL J.F.,
RA KOLATYKUDY P.E.;
RT "The expression of monocyte chemotactic protein (MCP-1) in human
vascular endothelium in vitro and in vivo.";
MOL. CELL. BIOCHEM. 126:61-68(1993).
[7]
RN SEQUENCE FROM N.A.
RP MEDLINE; 92095166.
RX YOSHIMURA T., LEONARD E.J.;
RT "Human monocyte chemoattractant protein-1 (MCP-1).";
ADV. EXP. MED. BIOL. 305:47-56(1991).
[8]
RN SEQUENCE OF 24-99.
RP MEDLINE; 89184525.
RX ROBINSON E.A., YOSHIMURA T., LEONARD E.J., TANAKA S., GRIFFIN P.R.,
RA SHABANOWITZ J., HUNT D.F., APPELLA E.;
RT "Complete amino acid sequence of a human monocyte chemoattractant, a
putative mediator of cellular immune reactions.";
PROC. NATL. ACAD. SCI. U.S.A. 86:1850-1854(1989).
[9]
RN SEQUENCE OF 29-53 AND 82-92.
RP MEDLINE; 90211336.
RX DECOCK B., CONINGS R., LENAERTS J.-P., BILIAU A., VAN DAMME J.;
RT "Identification of the monocyte chemotactic protein from human
osteosarcoma cells and monocytes: detection of a novel N-terminally
processed form.";
BIOCHEM. BIOPHYS. RES. COMMUN. 167:904-909(1990).
[10]
RN 3D-STRUCTURE MODELLING.
RP MEDLINE; 91312872.
RX GRONENBORN A.M., CLORE G.M.;
RT "Modelling the three-dimensional structure of the monocyte chemo-
attractant and activating protein MCP-1 on the basis of the
solution structure of interleukin-8.";
PROTEIN ENG. 4:263-269(1991).
[11]
RN X-RAY CRYSTALLOGRAPHY (1.85 ANGSTROMS).
RP MEDLINE; 97143315.
RX LUBKOWSKI J., BUJACZ G., DOMAILLE P.J., HANDEL T.M., WLODAWER A.;
RT "The structure of MCP-1 in two crystal forms provides a rare example
of variable quaternary interactions.";
NAT. STRUCT. BIOL. 4:64-69(1997).
[12]
RN STRUCTURE BY NMR.
RP MEDLINE; 96234959.
RX HANDEL T.M., DOMAILLE P.J.;
RT "Heteronuclear (1H, 13C, 15N) NMR assignments and solution structure
of the monocyte chemoattractant protein-1 (MCP-1) dimer.";
BIOCHEMISTRY 35:6569-6584(1996).
[13]
RN EFFECT OF DELETION OF N-TERMINAL RESIDUES.
RP MEDLINE; 96195223.
RX WEBER M., UGUCCIONI M., BAGGIOLINI M., CLARK-LEWIS I., DAHINDEN C.A.;
RT "Deletion of the NH2-terminal residue converts monocyte chemotactic
protein 1 from an activator of basophil mediator release to an
eosinophil chemoattractant.";
J. EXP. MED. 183:681-685(1996).
[14]
RN MUTAGENESIS.
RP MEDLINE; 94253189.
RX ZHANG Y.J., RUTLEDGE B.J., ROLLINS B.J.;
RT "Structure/activity analysis of human monocyte chemoattractant
protein-1 (MCP-1) by mutagenesis. Identification of a mutated protein
that inhibits MCP-1-mediated monocyte chemotaxis.";
J. BIOL. CHEM. 269:15918-15924(1994).

[15]
RN SUBUNIT.
RP MEDLINE; 97053697.
RX KIM K.-S., RAJARATHNAM K., CLARK-LEWIS I., SYKES B.D.;
RT "Structural characterization of a monomeric chemokine: monocyte
chemoattractant protein-3.";
FEBS LETT. 395:277-282(1996).
CC -1- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES AND BASOPHILS
BUT NOT NEUTROPHILS OR EOSINOPHILS. AUGMENTS MONOCYTE ANTI-TUMOR
ACTIVITY. HAS BEEN IMPLICATED IN THE PATHOGENESIS OF DISEASES
CHARACTERIZED BY MONOCYTIC INFILTRATES, LIKE PSORIASIS, RHEUMATOID
ARTHRITIS OR ATHEROSCLEROSIS. MAY BE INVOLVED IN THE RECRUITMENT
OF MONOCYTES INTO THE ARTERIAL WALL DURING THE DISEASE PROCESS OF
ATHEROSCLEROSIS.
CC -1- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM.
CC -1- PTM: PROCESSING AT THE N-TERMINUS CAN REGULATE RECEPTOR AND TARGET
CELL SELECTIVITY. DELETION OF THE AMINO- TERMINAL RESIDUE CONVERTS
IT FROM AN ACTIVATOR OF BASOPHIL TO AN EOSINOPHIL CHEMOATTRACTANT.
CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
C-C) (CHEMOKINE CC).
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CC -----
DR EMBL; M31626; G386961; -
DR EMBL; M30816; G386961; JOINED.
DR EMBL; M31625; G386961; JOINED.
DR EMBL; M24545; G307163; -
DR EMBL; M28226; G338009; -
DR EMBL; X14768; G34514; -
DR EMBL; M37119; G487124; -
DR EMBL; M28225; G338007; -
DR EMBL; M28223; G338007; JOINED.
DR EMBL; M28224; G338007; JOINED.
DR EMBL; S69738; G54545; -
DR EMBL; S71513; G240868; -
DR EMBL; A17786; G641145; -
DR PIR; A35474; A35474; -
DR PIR; S03339; S03339; -
DR PDB; IDOK; 12-MAR-97.
DR PDB; IDOK; 12-MAR-97.
DR PDB; IDOM; 14-OCT-96.
DR PDB; IDOM; 14-OCT-96.
DR PDB; IMCA; 15-OCT-94.
DR MM; 158105; -
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; 118; 1.
KW CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE; 3D-STRUCTURE.
FT CHAIN 1 23
FT MOD_RES 24 99 MONOCYTE CHEMOTACTIC PROTEIN 1.
FT DISULFID 34 59 PYRROLIDONE CARBOXYLIC ACID.
FT DISULFID 35 75
FT CARBOHYD 37 37
FT VARIANT 76 76
FT MUTAGEN 24 24 A -> T.
FT MUTAGEN 25 32 MISSING: LOSS OF ACTIVITY.
FT MUTAGEN 24 85 MISSING: LOSS OF ACTIVITY.
FT MUTAGEN 24 91 MISSING: 90% REDUCTION IN ACTIVITY.
FT MUTAGEN 26 26 MISSING: 83% REDUCTION IN ACTIVITY.
FT MUTAGEN 29 29 D->A: 90% REDUCTION IN ACTIVITY.
FT MUTAGEN 47 47 N->A: 50% REDUCTION IN ACTIVITY.
FT MUTAGEN 50 50 R->F: 95% REDUCTION IN ACTIVITY.
FT MUTAGEN 51 51 S->Q: 40% REDUCTION IN ACTIVITY.
FT MUTAGEN 53 53 Y->D: LOSS OF ACTIVITY.
FT MUTAGEN 91 91 D->L: LOSS OF ACTIVITY.
SQ SEQUENCE 99 AA; 11025 MW; 53558695 CRC32;

Query Match 100.0%; Score 84; DB 1; Length 99;
 Best Local Similarity 100.0%; Pred. No. 5.10e-07;
 Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 75 CADPKQKWQ 84
 | | | | | | | | | |
 Qy 1 CADPKQKWQ 10

RESULT 2
 ID MCPA_BOVIN STANDARD; PRT; 99 AA.
 AC P28291;
 DT 01-DEC-1992 (REL. 24, CREATED)
 DT 01-DEC-1992 (REL. 24, LAST SEQUENCE UPDATE)
 DT 01-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)
 DE MONOCYTE CHEMOTACTIC PROTEIN 1A PRECURSOR (MCP-1A) (MCP-1) (ACIDIC
 DE SEMINAL FLUID PROTEIN).
 GN BOS TAURUS (BOVINE).
 OS EURARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC ARTIODACTYLA; RUMINANTIA; PECORA; BOVOIDEA; BOVIDAE; BOVINAE; BOS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE-SEMINAL PLASMA;
 RX MEDLINE; 92096117.
 RA WEMPE F., HENSCHEN A., SCHEIT K.H.;
 RT "Gene expression and cDNA cloning identified a major basic protein
 RT constituent of bovine seminal plasma as bovine
 RT monocyte-chemoattractant protein-1 (MCP-1).";
 RL DNA CELL BIOL. 10:671-679(1991).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC TISSUE-SEMINAL PLASMA;
 RX MEDLINE; 92181448.
 RA WEMPE F., EINSPIANER R., SCHEIT K.H.;
 RT "Characterization by cDNA cloning of the mRNA of a new growth factor
 RT from bovine seminal plasma: acidic seminal fluid protein.";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 183:232-237(1992).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 94336337.
 RA WEMPE F., KUHLMANN J.K., SCHEIT K.H.;
 RT "Characterization of the bovine monocyte chemoattractant protein-1
 RT gene.";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 202:1272-1279(1994).
 CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
 CC NEUTROPHILS.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC -----
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 CC -----
 DR EMBL; L32659; G624394; -;
 DR EMBL; M84602; G163395; -;
 DR PIR; A39296; A39296.
 DR PIR; JC2336; JC2336.
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSSP; P13500; 1DON.
 KW CYTOKINE; CHEMOTAXIS; SIGNAL; BY SIMILARITY.
 FT SIGNAL 1 23
 FT CHAIN 24 24
 FT MOD_RES 24 24
 FT DISULFID 34 59
 FT DISULFID 35 75
 FT SEQUENCE 99 AA; 11114 MW; C6F5821D CRC32;
 RESULT 4
 ID MCP1_CANFA STANDARD; PRT; 101 AA.
 AC P52203;
 DT 01-OCT-1996 (REL. 34, CREATED)
 DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1) (MONOCYTE
 DE CHEMOATTRACTANT PROTEIN-1).
 GN SCYA2 OR MCP1.

Query Match 100.0%; Score 84; DB 1; Length 99;
 Best Local Similarity 100.0%; Pred. No. 5.10e-07;
 Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 75 CADPKQKWQ 84
 | | | | | | | | | |
 Qy 1 CADPKQKWQ 10

RESULT 3
 ID MCP2_BOVIN STANDARD; PRT; 99 AA.
 AC Q09141;
 DT 01-NOV-1995 (REL. 32, CREATED)
 DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DE MONOCYTE CHEMOTACTIC PROTEIN 2 PRECURSOR (MCP-2) (MONOCYTE
 DE CHEMOATTRACTANT PROTEIN 2).
 GN SCYA8 OR MCP2.
 OS BOS TAURUS (BOVINE).
 OC EURARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC ARTIODACTYLA; RUMINANTIA; PECORA; BOVOIDEA; BOVIDAE; BOVINAE; BOS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 94114084.
 RA WEMPE F., HANES J., SCHEIT K.H.;
 RT "Cloning of the gene for bovine monocyte chemoattractant protein-2.";
 RL DNA CELL BIOL. 13:1-8(1994).
 CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES. THIS PROTEIN
 CC CAN BIND HEPARIN.
 CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC -----
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 CC or send an email to license@isb-sib.ch).
 CC -----
 DR EMBL; S67954; E118856; -;
 DR EMBL; S67956; G544997; -;
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSSP; P80098; 1NCV.
 KW CYTOKINE; CHEMOTAXIS; SIGNAL; HEPARIN-BINDING; INFLAMMATORY RESPONSE.
 FT SIGNAL 1 23
 FT CHAIN 24 24
 FT MOD_RES 24 24
 FT DISULFID 34 59
 FT DISULFID 35 75
 FT SEQUENCE 99 AA; 10900 MW; 9BA2CD26 CRC32;
 Query Match 100.0%; Score 84; DB 1; Length 99;
 Best Local Similarity 100.0%; Pred. No. 5.10e-07;
 Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 75 CADPKQKWQ 84
 | | | | | | | | | |
 Qy 1 CADPKQKWQ 10

RESULT 4
 ID MCP1_CANFA STANDARD; PRT; 101 AA.
 AC P52203;
 DT 01-OCT-1996 (REL. 34, CREATED)
 DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1) (MONOCYTE
 DE CHEMOATTRACTANT PROTEIN-1).
 GN SCYA2 OR MCP1.

OS CANIS FAMILIARIS (DOG).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC CARNIVORA; FISSIPEDIA; CANIDAE; CANIS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE-JUGULAR VEIN ENDOTHELIAL;
 RX MEDLINE; 97176620.
 RA KOMAR A.G., BALLANTYNE C.M., MICHAEL L.H., KUKIELKA G.L., YOURER K.A.,
 RA LINDSEY M.L., HAWKINS H.K., BIRDSALL H.H., MACKAY C.R., LAROSA G.J.,
 RA ROSSEN R.D., SMITH C.W., ENTMAN M.L.;
 RT "Induction of monocyte chemoattractant protein-1 in the small veins
 of the ischemic and reperfused canine myocardium."
 RL CIRCULATION 95:693-700(1997).
 CC -1- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
 CC NEUTROPHILS. IMPORTANT FACTOR IN THE COURSE OF THE INFLAMMATORY
 CC REACTION TO REPERFUSION OF THE PREVIOUSLY ISCHEMIC MYOCARDIUM.
 CC MAY PLAY A SIGNIFICANT ROLE IN MONOCYTE TRAFFICKING INTO THE
 CC REPERFUSED MYOCARDIUM.
 CC -1- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
 CC -1- INDUCTION: BY TNF-ALPHA.
 CC -1- TISSUE SPECIFICITY: ENDOTHELIUM OF SMALL VEINS AND INTRAFASCICULAR
 CC VEINS, AND INFILTRATING LEUKOCYTES.
 CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
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 CC -----
 CC EMBL: U29653; G1144186; -.
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSSP; PI3500; 1DON.
 KW CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE.
 FT SIGNAL 1 23 BY SIMILARITY.
 FT CHAIN 24 101 MONOCYTE CHEMOTACTIC PROTEIN 1.
 FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
 FT SIMILARITY).
 FT DISULFID 34 59 BY SIMILARITY.
 FT DISULFID 35 75 BY SIMILARITY.
 FT CARBOHYD 40 40 POTENTIAL.
 FT CARBOHYD 55 55 POTENTIAL.
 FT CARBOHYD 112 112 POTENTIAL.
 SQ SEQUENCE 101 AA; 11121 MW; A7075B14 CRC32;

 Query Match 100.0%; Score 84; DB 1; Length 101;
 Best Local Similarity 100.0%; Pred. No. 5.10e-07;
 Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Db 75 CADPKQKWQ 84
 QY 1 CADPKQKWQ 10
 |||||
 RESULT 5
 ID MCP1_RABIT STANDARD; PRT; 125 AA.
 AC P28292.
 DT 01-DEC-1992 (REL. 24, CREATED)
 DT 01-DEC-1992 (REL. 24, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1).
 GN SCY2.
 OS ORYCTOLAGUS CUNICULUS (RABBIT).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC LAGOMORPHA; LEPORIDAE; ORYCTOLAGUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN-NEW ZEALAND WHITE; TISSUE-SPLEEN;
 RX MEDLINE; 91225489.
 RA YOSHIMURA T., YUKKI N.;
 RT "Neutrophil attractant/activation protein-1 and monocyte
 RT chemoattractant protein-1 in rabbit. cDNA cloning and their

RT expression in spleen cells.";
 RL J. IMMUNOL. 146:3483-3488(1991).
 CC -1- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
 CC NEUTROPHILS.
 CC -1- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
 CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC -----
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 CC -----
 CC EMBL: M57440; G165470; -.
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSSP; PI3500; 1DON.
 KW CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE; GLYCOPROTEIN.
 FT SIGNAL 1 23 BY SIMILARITY.
 FT CHAIN 24 125 MONOCYTE CHEMOTACTIC PROTEIN 1.
 FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
 FT SIMILARITY).
 FT DISULFID 34 59 BY SIMILARITY.
 FT DISULFID 35 75 BY SIMILARITY.
 FT CARBOHYD 40 40 POTENTIAL.
 FT CARBOHYD 55 55 POTENTIAL.
 FT CARBOHYD 112 112 POTENTIAL.
 SQ SEQUENCE 125 AA; 13776 MW; FBAC9D27 CRC32;

 Query Match 100.0%; Score 84; DB 1; Length 125;
 Best Local Similarity 100.0%; Pred. No. 5.10e-07;
 Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Db 75 CADPKQKWQ 84
 QY 1 CADPKQKWQ 10
 |||||
 RESULT 6
 ID MCP1_PIG STANDARD; PRT; 99 AA.
 AC P42831;
 DT 01-NOV-1995 (REL. 32, CREATED)
 DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1).
 GN SCY2.
 OS SUS SCROFA (PIG).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC ARTIODACTYLA; SUIFORMES; SUINA; SUIDAE; SUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 94183284.
 RA HOSANG K., KNOKE I., KLAUDINY J., WEMPE F., WUTTKE W., SCHEIT K.H.;
 RT "Porcine luteal cells express monocyte chemoattractant protein-1
 RT (MCP-1): analysis by polymerase chain reaction and cDNA cloning.";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 199:962-968(1994).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC TISSUE-BRAIN;
 RA ZACH O.R.F.;
 RL SUBMITTED (JUL-1994) TO EMBL/GENBANK/DBJ DATA BANKS.
 CC -1- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
 CC NEUTROPHILS.
 CC -1- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
 CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC -----
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CC EMBL: 248479; G683717; -.
CC EMBL: X79416; G872313; -.
CC PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
CC PFAM: PF00048; i18; 1.
CC HSP: P13500; IDOL.
CC CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE.
CC SIGNAL 1 23 BY SIMILARITY.
CC CHAIN 24 99 MONOCYTE CHEMOTACTIC PROTEIN 1.
CC MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
CC SIMILARITY).
CC DISULFID 34 59 BY SIMILARITY.
CC DISULFID 35 75 BY SIMILARITY.
CC SEQUENCE 99 AA; 10976 MW; ECC3AFB4 CRC32;
Query Match 98.8%; Score 83; DB 1; Length 99;
Best Local Similarity 90.0%; Pred. No. 8.92e-07;
Matches 9; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 75 CAEPKQKWQ 84
QY 1 CADPKQKWQ 10
RESULT 7 STANDARD; PRT; 98 AA.
AC Q99616;
DT 15-JUL-1998 (REL. 36, CREATED)
DT 15-JUL-1998 (REL. 36, LAST SEQUENCE UPDATE)
DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 4 PRECURSOR (MCP-4) (MONOCYTE
DE CHEMOATTRACTANT PROTEIN 4) (CK-BETA10) (NCC-1).
OS HOMO SAPIENS (HUMAN).
GN HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=HEART;
RX GARCIA-ZEPEDA E.A., COMBADIERE C., ROTHENBERG M.E., SARAFI M.N.,
RA LAVIGNE F., HAMID Q., MURPHY P.M., LUSTER A.D.;
RT "Human monocyte chemoattractant protein (MCP)-4 is a novel CC
RT chemokine with activities on monocytes, eosinophils, and basophils
RT induced in allergic and nonallergic inflammation that signals through
RT the CC chemokine receptors (CCR)-2 and -3.";
RL J. IMMUNOL. 157:5613-5626(1996).
RN [2]
RP SEQUENCE FROM N.A., AND SEQUENCE OF 17-98.
RC TISSUE=FETAL;
RX MEDLINE: 96235049.
RA UGUCCIONI M., LOETSCHER P., FORSSMANN U., DEWALD B., LI H., LIMA S.H.,
RA LI Y., KREIDER B., GAROTTA G., THELEN M., BAGGIOLINI M.;
RT "Monocyte chemotactic protein 4 (MCP-4), a novel structural and
RT functional analogue of MCP-3 and eotaxin.";
RL J. EXP. MED. 183:2379-2384(1996).
RN [3]
RP SEQUENCE FROM N.A., AND SEQUENCE OF 22-33.
RC TISSUE=FETAL;
RX MEDLINE: 97341179.
RA BERKHOUT T.A., RAPE T.J., BRANNER M., MAKWANA J., FOLEY J.J.,
RA APPELBAUM E., RAPE T.J., BRANNER M., MAKWANA J., FOLEY J.J.,
RA SCHMIDT D.B., IMBURGIA C., MACNULTY D., MATTHEWS J., O'DONNELL K.,
RA O'SHANNESY D., SCOTT M., GROOT P.H.E., MACPHEE C.;
RT "Cloning, in vitro expression, and functional characterization of a
RT novel human CC chemokine of the monocyte chemotactic protein (MCP)
RT family (MCP-4) that binds and signals through the CC chemokine
RT receptor 2B.";
RL J. BIOL. CHEM. 272:16404-16413(1997).

RN SEQUENCE FROM N.A.
RP DANIE M., GIBSON A.;
RL SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [5]
RP SEQUENCE FROM N.A.
RC TISSUE=LUNG;
RA POWER C.A., MEYER A., RISON S.C.G., GUYE-COULIN F., WELLS T.N.C.;
RL SUBMITTED (DEC-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -1- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, LYMPHOCYTES,
CC BASOPHILS AND EOSINOPHILS, BUT NOT NEUTROPHILS. SIGNALS THROUGH
CC CCR2B AND CCR3 RECEPTORS. PLAYS A ROLE IN THE ACCUMULATION OF
CC LEUKOCYTES AT BOTH SIDES OF ALLERGIC AND NONALLERGIC INFLAMMATION.
CC MAY BE INVOLVED IN THE RECRUITMENT OF MONOCYTES INTO THE ARTERIAL
CC WALL DURING THE DISEASE PROCESS OF ARTEROSCLEROSIS. MAY PLAY A
CC ROLE IN THE MONOCYTE ATTRACTION IN TISSUES CHRONICALLY EXPOSED TO
CC EXOGENOUS PATHOGENS.
CC -1- MASS SPECTROMETRY: MW=9314; MW_ERR=30; METHOD=MALDI; RANGE=17-98.
CC -1- MASS SPECTROMETRY: MW=8760; MW_ERR=30; METHOD=MALDI; RANGE=22-98.
CC -1- MASS SPECTROMETRY: MW=8575; MW_ERR=30; METHOD=MALDI; RANGE=24-98.
CC -1- INDUCTION: BY INTERLEUKIN-1 AND TNF-ALPHA.
CC -1- TISSUE SPECIFICITY: WIDELY EXPRESSED. FOUND IN SMALL INTESTINE,
CC THYMUS, COLON, LUNG, TRACHEA, STOMACH AND LYMPH NODE. LOW LEVELS
CC SEEN IN THE PULMONARY ARTERY SMOOTH MUSCLE CELLS.
CC -1- THIS PROTEIN CAN BIND HEPARIN.
CC -1- PTM: ONE MAJOR ISOFORM MCP-4, AND TWO MINOR ISOFORMS (LA)MCP-4 AND
CC (FNPQGLA)MCP-4 ARE PRODUCED BY DIFFERENTIAL SIGNAL CLEAVAGE.
CC (LA)MCP-4 IS ABOUT 30 FOLD LESS ACTIVE THAN MCP-4.
CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
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EMBL: U46767; G1732123; -.
EMBL: AC002482; G2340091; -.
EMBL: X98306; E248571; -.
MIM: 601391; -.
PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
PFAM: PF00048; i18; 1.
HSP: P13500; IDOL.
CYTOKINE; CHEMOTAXIS; SIGNAL; GLYCOPROTEIN; INFLAMMATORY RESPONSE.
KW SIGNAL 1 23
FT CHAIN 24 98 MONOCYTE CHEMOTACTIC PROTEIN 4.
FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID.
FT DISULFID 34 58 BY SIMILARITY.
FT DISULFID 35 74 BY SIMILARITY.
FT CARBOHYD 29 29 POTENTIAL.
SQ SEQUENCE 98 AA; 10986 MW; DF52F6EC CRC32;
Query Match 95.2%; Score 80; DB 1; Length 98;
Best Local Similarity 90.0%; Pred. No. 4.71e-06;
Matches 9; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 74 CADPKQKWQ 83
QY 1 CADPKQKWQ 10
RESULT 8 STANDARD; PRT; 96 AA.
AC EOTA_CAVPO
DT 01-JUN-1994 (REL. 29, CREATED)
DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE EOTAXIN PRECURSOR (EOSINOPHIL CHEMOTACTIC PROTEIN).
GN SCY11.
OS CAVIA PORCELLUS (GUINEA PIG).

OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 EN RODENTIA; HYSTRICOGNATHI; CAVIIDAE; CAVIA.
 [1]
 RC SEQUENCE FROM N.A.
 RC TISSUE=LUNG;
 RX MEDLINE; 95173589.
 RA ROTHENBERG M.E., LUSTER A.D., LILLY C.M., DRAZEN J.M., LEDER P.;
 RT "Constitutive and allergen-induced expression of eotaxin mRNA in the
 RT guinea pig lung.";
 RL J. EXP. MED. 181:1211-1216(1995).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 95091818.
 RA JOSE P.J., ADCOCK I.M., GRIFFITHS-JOHNSON D.A., BERKMAN N.,
 RT WELLS T.C., WILLIAMS T.J., POWER C.A.;
 RT "Eotaxin: cloning of an eosinophil chemoattractant cytokine and
 RT increased mRNA expression in allergen-challenged guinea-pig lungs.";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 205:788-794(1994).
 RN [3]
 RP SEQUENCE OF 24-96.
 RC STRAIN-HARTLEY; TISSUE=LUNG;
 RX MEDLINE; 94157409.
 RA JOSE P.J., GRIFFITHS-JOHNSON D.A., COLLINS P.D., WALSH D.T.,
 RT MOOREL R., TOITY N.F., TRUONG O., HSUAN J.J., WILLIAMS T.J.;
 RT "Eotaxin: a potent eosinophil chemoattractant cytokine detected in a
 RT guinea pig model of allergic airways inflammation.";
 RL J. EXP. MED. 179:881-887(1994).
 RN [4]
 RP FUNCTION: IN RESPONSE TO THE PRESENCE OF ALLERGENS, THIS PROTEIN
 CC DIRECTLY PROMOTES THE ACCUMULATION OF EOSINOPHILS, A PROMINENT
 CC FEATURE OF ALLERGIC INFLAMMATORY REACTIONS.
 CC [5]
 RP SUBCELLULAR LOCATION: EXTRACELLULAR.
 CC [6]
 RP TISSUE SPECIFICITY: LUNG.
 CC [7]
 RP PTM: O-GLYCOSYLATED (PROBABLE).
 CC [8]
 RP SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC [9]
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 CC [10]
 DR EMBL; U18941; G687656;
 DR EMBL; X77603; G602552;
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; I18; 1.
 DR HSP; P13500; IMCA.
 KW EOSINOPHIL; CYTOKINE; CHEMOTAXIS; GLYCOPROTEIN; SIGNAL;
 FT INFLAMMATORY RESPONSE
 FT SIGNAL 1 23
 FT CHAIN 24 96
 FT DISULFID 31 56
 FT BY SIMILARITY.
 FT DISULFID 32 72
 FT BY SIMILARITY.
 FT CARBOHYD 93 93
 FT POTENTIAL.
 FT CONFLICT 88 88
 FT D-> G (IN REF. 2).
 SQ SEQUENCE 96 AA; 10753 MW; DD28C7E5 CRC32;
 Query Match 91.7%; Score 77; DB 1; Length 96;
 Best Local Similarity 90.0%; Pred. No. 2.43e-05;
 Matches 9; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Db 72 CADPRKKWQV 81
 QY 1 CADPRKKWQV 10
 RESULT 9
 ID EOTA_HUMAN STANDARD; PRT; 97 AA.
 AC P51671; P50877; Q92490; Q92491;
 DT 01-OCT-1996 (REL. 34, CREATED)
 DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)

DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
 DE EOTAXIN PRECURSOR (EOSINOPHIL CHEMOTACTIC PROTEIN).
 GN SCVALL.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 96181758.
 RA GARCIA-ZEPEDA E.A., ROTHENBERG M.E., OWNBEY T.R., LEDER P.,
 RA LUSTER A.D.;
 RT "Human eotaxin is a specific chemoattractant for eosinophil cells and
 RT provides a new mechanism to explain tissue eosinophilia.";
 RL NAT. MED. 2:449-456(1996).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 96189937.
 RA PONATH P.D., QIN S., RINGLER D.J., CLARK-LEWIS I., WANG J., KASSAM N.,
 RA SMITH H., SHI X., GONZALO J.A., NEWMAN W., GUTIERREZ-RAMOS J.C.,
 RA MACKAY C.R.;
 RT "Cloning of the human eosinophil chemoattractant, eotaxin.
 RT Expression, receptor binding, and functional properties suggest a
 RT mechanism for the selective recruitment of eosinophils.";
 RL J. CLIN. INVEST. 97:604-612(1996).
 RN [3]
 RP SEQUENCE FROM N.A.
 RC TISSUE=SMALL INTESTINE;
 RX MEDLINE; 96205964.
 RA KITaura M., NAKAJIMA T., IMAI T., HARADA S., COMBADIÈRE C.,
 RA TIFFANY H.L., MURPHY P.M., YOSHIE O.;
 RT "Molecular cloning of human eotaxin, an eosinophil-selective CC
 RT chemokine, and identification of a specific eosinophil eotaxin
 RT receptor, CC chemokine receptor 3.";
 RL J. BIOL. CHEM. 271:7725-7730(1996).
 RN [4]
 RP SEQUENCE FROM N.A.; SEQUENCE OF 60-65 AND 75-88, AND VARIANTS.
 RC TISSUE=FORESKIN;
 RX MEDLINE; 96374440.
 RA BARTELS J., SCHLUETER C., RICHTER E., NOSO N., KULKE R.,
 RA CHRISTOPHERS E., SCHROEDER J.M.;
 RT "Human dermal fibroblasts express eotaxin: molecular cloning, mRNA
 RT expression, and identification of eotaxin sequence variants.";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 225:1045-1051(1996).
 RN [5]
 RP SEQUENCE FROM N.A.
 RC TISSUE=PLACENTA;
 RX MEDLINE; 97312708.
 RA GARCIA-ZEPEDA E.A., ROTHENBERG M.E., WEREMOWICZ S., SARAFI M.N.,
 RA MORTON C.C., LUSTER A.D.;
 RT "Genomic organization, complete sequence, and chromosomal location of
 RT the gene for human eotaxin (SCVALL), an eosinophil-specific CC
 RT chemokine.";
 RL GENOMICS 41:471-476(1997).
 RN [6]
 RP SEQUENCE FROM N.A.
 RC TISSUE=LUNG;
 RX MEDLINE; 97445071.
 RA HEIN H., SCHLUETER C., KULKE R., CHRISTOPHERS E., SCHROEDER J.M.,
 RA BARTELS J.;
 RT "Genomic organization, sequence, and transcriptional regulation of
 RT the human eotaxin gene.";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 237:537-542(1997).
 RN [7]
 RP STRUCTURE BY NMR.
 RX MEDLINE; 98380469.
 RA CRUMP M.P., RAJARATHNAM K., KIM K.S., CLARK-LEWIS I., SYKES B.D.;
 RT "Solution structure of eotaxin, a chemokine that selectively recruits
 RT eosinophils in allergic inflammation.";
 RL BIOCHEMISTRY 37:11670-11676(1998).
 CC [8]
 RP FUNCTION: IN RESPONSE TO THE PRESENCE OF ALLERGENS, THIS PROTEIN
 CC DIRECTLY PROMOTES THE ACCUMULATION OF EOSINOPHILS, A PROMINENT
 CC FEATURE OF ALLERGIC INFLAMMATORY REACTIONS.
 CC [9]
 RP SUBCELLULAR LOCATION: EXTRACELLULAR.

RC	TISSUE=OSTEOSARCOMA;
RX	MEDLINE; 92308855.
RA	VAN DAMME J., PROOST P., LENAERTS J.-P., OPDENAKKER G.;
RT	"Structural and functional identification of two human,
RT	monocyte chemotactic proteins (MCP-2 and MCP-3) belonging to the
RT	chemokine family.";
RL	J. EXP. MED. 176:59-65(1992).
RN	[5]
RP	STRUCTURE BY NMR, AND SUBUNIT.
RX	MEDLINE; 97053697.
RA	KIM K.-S., RAJARATHNAM K., CLARK-Lewis I., SYKES B.D.;
RT	"Structural characterization of a monomeric chemokine: monocyte
RT	chemoattractant protein-3";
RL	FEBs LETT. 395:277-282(1996).
RN	[6]
RP	STRUCTURE BY NMR.
RX	MEDLINE; 97463733.
RA	MEUNIER S., BERNASAU J.-M., GUILLEMOT J.-C., FERRARA P., DARBON H.;
RT	"Determination of the three-dimensional structure of CC chemokine
RT	monocyte chemoattractant protein 3 by 1H two-dimensional NMR
RT	spectroscopy.";
RL	BIOCHEMISTRY 36:4412-4422(1997).
CC	-I- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES AND
CC	EOSINOPHILS, BUT NOT NEUTROPHILS. AUGMENTS MONOCYTE ANTI-TUMOR
CC	ACTIVITY. ALSO INDUCES THE RELEASE OF GELATINASE B. THIS PROTEIN
CC	CAN BIND HEPARIN.
CC	-I- SUBUNIT: MONOMER.
CC	-I- PTM: O-GLYCOSYLATED.
CC	-I- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC	C-C) (CHEMOKINE CC).
CC	-----
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CC	-----
DR	EMBL; X72308; G313708; ALT_INIT
DR	EMBL; X72309; ; NOT_ANNOTATED_CDS.
DR	EMBL; X71087; G288399; -
DR	EMBL; X71087; G288398; ALT_INIT.
DR	EMBL; X71087; G288397; ALT_INIT.
DR	PIR; JC1478; JC1478.
DR	PIR; S32222; S32222.
DR	PIR; A54678; A54678.
DR	PDB; INCV; 15-OCT-97.
DR	MM; M58106; -
DR	PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR	PFAM; PF00048; i18; 1.
KW	CYTOKINE; CHEMOTAXIS; HEPARIN-BINDING; GLYCOPROTEIN; SIGNAL;
KW	INFLAMMATORY RESPONSE; 3D-STRUCTURE.
KW	SIGNAL
FT	CHAIN 1 23
FT	FT CHAIN 24 99
FT	MOD_RES 24 99
FT	DISULFID 34 59
FT	DISULFID 35 75
FT	CARBOHYD 29 29
FT	POTENTIAL
FT	CONFLICT 30 30
FT	CONFLICT 68 70
FT	T -> K (IN REF. 4).
FT	MISSING (IN REF. 4).
SQ	SEQUENCE 99 AA; 11200 MW; 7502E19C CRC32;
	Query Match
	Best Local Similarity 91.7%; Score 77; DB 1; Length 99;
	Matches 9; Conservative 0; Pred.No. 2.43e-05;
	Indels 0; Gaps 0;
Db	75 CADPTQKWV 84
Oy	1 CADPTQKWV 10

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ID  M2P2_PIG          STANDARD;          PRT;          99 AA.
AC  P49873;
DT  01-OCT-1996 (REL. 34, CREATED)
DT  01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
DT  15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE  MONOCYTE CHEMOTACTIC PROTEIN 2 PRECURSOR (MCP-2) (MONOCYTE
DE  CHEMOATTRACTANT PROTEIN 2).
GN  SCYA8 OR MCP2.
OS  SUS SCROFA (PIG).
OC  EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC  ARTIODACTYLIA; SULIFORMES; SUINA; SUIDAE; SUS.
RN  [1]
RP  SEQUENCE FROM N.A.
RX  MEDLINE; 95091716.
RA  HOSANG K.K., KNOKE I.I., KLAUDINY J.J., WEMPE F.F., WUTKE W.W.,
RA  SCHEIT K.K.;
RT  "Porcine luteal cells express monocyte chemoattractant protein-2
RT  (MCP-2): analysis by cDNA cloning and northern analysis.";
RL  BIOCHEM. BIOPHYS. RES. COMMUN. 205:148-153(1994).
CC  -|- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES. THIS PROTEIN
CC  CAN BIND HEPARIN.
CC  -|- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
CC  -|- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC  C-C) (CHEMOKINE CC).
CC  -----
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CC  -----
CC  EMBL; L04985; G349821;
DR  PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR  PFAM; PF00048; 118; 1.
DR  HSSP; P80098; INCV.
KW  CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE; GLYCOPROTEIN.
FT  SIGNAL 1 23 BY SIMILARITY.
FT  CHAIN 24 120 MONOCYTE CHEMOTACTIC PROTEIN 1.
FT  MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
FT  SIMILARITY).
FT  DISULFID 33 57 BY SIMILARITY.
FT  DISULFID 34 73 BY SIMILARITY.
FT  CARBOHYD 97 97 POTENTIAL.
FT  SEQUENCE 120 AA; 13741 MW; 22FAD257 CRC32;
SQ  QUERY MATCH 91.7%; Score 77; DB 1; Length 120;
Best Local Similarity 90.0%; Pred. No. 2.43e-05;
Matches 9; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db  73 CADPTQKWVQ 82
QY  1 CADPKQKWVQ 10

RESULT 15
ID  M1A_RAT          STANDARD;          PRT;          92 AA.
AC  P50229;
DT  01-OCT-1996 (REL. 34, CREATED)
DT  01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
DT  01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
DE  MACROPHAGE INFLAMMATORY PROTEIN 1-ALPHA PRECURSOR (MIP-1-ALPHA).
DE  SCYA3 OR MIP1A.
GN  RATTUS NORVEGICUS (RAT).
OS  RATTUS NORVEGICUS (RAT).
OC  EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC  RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
RN  [1]
RP  SEQUENCE FROM N.A.
RX  STRAIN-CD-1; TISSUE=LUNG;
RX  MEDLINE; 95298037.
RA  SHI M.M., GODLESKI J.J., PAULASKIS J.D.;
RT  "Molecular cloning and posttranscriptional regulation of macrophage
RT  inflammatory protein-1 alpha in alveolar macrophages.";
RL  BIOCHEM. BIOPHYS. RES. COMMUN. 211:289-295(1995).
RN  [2]
RP  SEQUENCE FROM N.A.
RX  STRAIN=LONG EVANS; TISSUE=LUNG;
RX  MEDLINE; 95238980.
RA  SHANLEY T.P., SCHMAL H., FRIEDL H.P., JONES M.L., WARD P.A.;
RT  "Role of macrophage inflammatory protein-1 alpha (MIP-1 alpha) in
RT  acute lung injury in rats.";
RL  J. IMMUNOL. 154:4793-4802(1995).
RN  [3]
RP  SEQUENCE OF 24-57.
RX  STRAIN=WISTAR;
RX  MEDLINE; 96183056.
RA  NAKAGAWA H., SHIOTA S., TAKANO K., SHIBATA F., KATO H.;
RT  "Cytokine-induced neutrophil chemoattractant (CINC)-2 alpha, a novel
RT  member of rat GRO/CINC, is a predominant chemokine produced by

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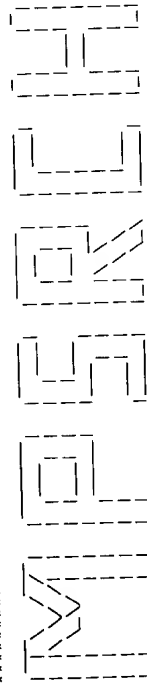
RT lipopolysaccharide-stimulated rat macrophages in culture.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 220:945-948(1996).
CC -!- FUNCTION: MONOKINE WITH INFLAMMATORY AND CHEMOKINETIC PROPERTIES.
CC HAS CHEMOTACTIC ACTIVITY FOR MONOCYTES, NEUTROPHILS, EOSINOPHILS,
CC BASOPHILS, AND LYMPHOCYTES. REQUIRED FOR LUNG TNF-ALPHA
CC PRODUCTION, NEUTROPHIL RECRUITMENT AND SUBSEQUENT LUNG INJURY AND
CC MAY FUNCTION AS AN AUTOCRINE MEDIATOR FOR THE MACROPHAGE
CC PRODUCTION OF TNF-ALPHA WHICH IN TURN UP-REGULATES VASCULAR
CC ADHESION MOLECULES REQUIRED FOR NEUTROPHIL INFUX. THIS PROTEIN
CC BINDS HEPARIN.
CC -!- INDUCTION: BY LIPOLYSACCHARIDE (LPS).
CC -!- SIMILARITY: BELONGS TO THE INTERGRIN BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC -----
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CC -----
DR EMBL; U22414; G790633; -
DR EMBL; U06435; G459150; -
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; I18; 1.
DR HSP; P13236; IHUN.
KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL; HEPARIN-BINDING.
FT SIGNAL 1 23
FT CHAIN 24 92 MACROPHAGE INFLAMMATORY PROTEIN 1-ALPHA.
FT DISULFID 34 57 BY SIMILARITY.
FT DISULFID 35 73 BY SIMILARITY.
FT CONFLICT 6 6 A -> T (IN REF. 2).
FT CONFLICT 57 57 C -> W (IN REF. 2 AND 3).
SQ SEQUENCE 92 AA; 10335 MW; F48CF89F CRC32;

Query Match 86.9%; Score 73; DB 1; Length 92;
Best Local Similarity 80.0%; Pred. NO. 2.07e-04;
Matches 8; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 73 CADPKETWVQ 82
QY 1 CADPKOKWVQ 10

```

Search completed: Fri Feb 4 16:59:28 2000
Job time : 6 secs.



***** (TM) *****

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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 16:58:49 2000; Maspar time 3.53 Seconds
113.540 Million cell updates/sec

Tabular output not generated.

Title: >US-09-150-813-7
Description: (1-10) from US09150813.1.ppt
Perfect Score: 84
Sequence: 1 CADPKQKVVQ 10

Scoring table: PAM 150
Gap 15

Searched: 122810 seqs, 40068593 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: pir60
1:pir1 2:pir2 3:pir3 4:pir4

Statistics: Mean 23.976; Variance 35.473; scale 0.676

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	ID	Description	Pred. No.
1	84	100.0	99	2	monocyte chemoattractant	7.50e-06
2	84	100.0	99	2	monocyte chemoattractant	7.50e-06
3	84	100.0	99	2	monocyte chemoattractant	7.50e-06
4	84	100.0	125	2	monocyte chemoattractant	7.50e-06
5	83	98.8	96	2	monocyte chemoattractant	1.23e-05
6	77	91.7	96	2	eotaxin precursor - g	2.34e-04
7	77	91.7	96	2	eotaxin precursor - r	2.34e-04
8	77	91.7	99	2	monocyte chemoattractant	2.34e-04
9	77	91.7	109	2	monocyte chemoattractant	2.34e-04
10	77	91.7	120	2	eotaxin precursor - h	9.86e-04
11	74	88.1	97	2	macrophage inflammatory	1.58e-03
12	73	86.9	92	2	interleukin-8 - dog	1.58e-03
13	73	86.9	95	2	interleukin-8 - rabbit	1.58e-03
14	73	86.9	101	2	interleukin-8 - sheep	1.58e-03
15	73	86.9	101	2	interleukin-8 - sheep	1.58e-03
16	73	86.9	103	2	alveolar macrophage c	1.58e-03
17	73	86.9	103	2	interleukin-8 precursor	1.58e-03
18	73	86.9	103	2	monocyte chemoattractant	4.06e-03
19	71	84.5	99	2	Neutrophil attractant	6.47e-03
20	70	83.3	101	2	PDGF-inducible JE gly	1.05e-02
21	69	82.1	148	2	Interleukin-8 homolog	2.58e-02
22	67	79.8	89	2	pre-B-cell growth-sti	2.58e-02
23	67	79.8	89	2	pre-B-cell growth-sti	2.58e-02

cytokine SDF-1-beta - 2.58e-02
interleukin-8 precursor 2.58e-02
monocyte chemoattractant 4.06e-02
macrophage inflammatory 4.06e-02
monocyte adherence-in 9.97e-02
macrophage inflammatory 9.97e-02
macrophage inflammatory 9.97e-02
LD78-beta protein pre 9.97e-02
immediate-early serum 1.55e-01
immune activation gen 3.74e-01
lymphotactin precursor 5.77e-01
monocyte chemoattract 5.77e-01
hypothetical protein 8.86e-01
lymphocyte and monocy 8.86e-01
hypothetical protein 1.36e+00
probable ribonucleosi 1.36e+00
monocytic cytokine FI 2.07e+00
probable resistance g 2.07e+00
lymphotactin precursor 3.14e+00
hypothetical protein 4.74e+00
hypothetical protein 7.13e+00

ALIGNMENTS

RESULT 1 A60299 #type complete
ENTRY monocyte chemoattractant protein 1 precursor - human
TITLE GDCF-1; glioma-derived monocyte chemotactic factor 1; MCAF;
ALTERNATE_NAMES MCP-1; monocyte chemotactic factor 1; monocyte secretory
protein; tumor-derived chemotactic factor 2 (GDCF-2)
CONTAINS glioma-derived chemotactic factor 2 (GDCF-2)
ORGANISM #formal_name Homo sapiens #common_name man
DATE 20-Feb-1993 #sequence_revision 20-Feb-1993 #text_change
20-Mar-1998
ACCESSIONS A35474; A33476; S03339; I51841; A60299; A32300; A32396;
A34561; I57488; JC1096
REFERENCE A35474
#authors Shyy, Y.J.; Li, Y.S.; Kolattukudy, P.E.
#journal Biochem. Biophys. Res. Commun. (1990) 169:346-351
#title Structure of human monocyte chemotactic protein gene and its
regulation by TPA.
#cross-references MUID:90290466
#accession A35474
#molecule_type DNA
#residues 1-99 #label SHY
#cross-references GB:M37719; NID:g187447; PID:g487124
REFERENCE A33476
#authors Rollins, B.J.; Stier, P.; Ernst, T.; Wong, G.G.
#journal Mol. Cell. Biol. (1989) 9:4687-4695
#title The human homolog of the JE gene encodes a monocyte secretory
protein.
#cross-references MUID:90097880
#accession A33476
#molecule_type mRNA
#residues 1-99 #label ROL
#cross-references GB:M31625; GB:M31626; NID:g188701;
PID:g386961
REFERENCE S03339
#authors Yoshimura, T.; Yuhki, N.; Moore, S.K.; Appella, E.; Lerman,
M.I.; Leonard, E.J.
#journal FEBS Lett. (1989) 244:487-493
#title Human monocyte chemoattractant protein-1 (MCP-1). Full-length
cDNA cloning, expression in mitogen-stimulated blood
mononuclear leukocytes, and sequence similarity to mouse
competence gene JE.
#cross-references MUID:89153605
#accession S03339
#status not compared with conceptual translation
#molecule_type mRNA
#residues 1-99 #label YOS
#cross-references GB:X14768; NID:g34513; PID:g34514

```

#experimental_source glioma cell line U-105MG
REFERENCE
151841
#authors Yoshimura, T.; Leonard, E.J.
#journal Adv. Exp. Med. Biol. (1991) 305:47-56
#title Human monocyte chemoattractant protein-1 (MCP-1).
#cross-references MUID:92095166
#accession I51841
#status Preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-99 ##label Y02
#cross-references GB:S71513; NID:9240867; PID:9240868
REFERENCE
A60299
#authors Bottazzi, B.; Colotta, F.; Sica, A.; Nobili, N.; Mantovani, A.
#journal Int. J. Cancer (1990) 45:795-797
#title A chemoattractant expressed in human sarcoma cells (tumor-derived chemotactic factor, TDCF) is identical to monocyte chemoattractant protein-1/monocyte chemotactic and activating factor (MCP-1/MCAF).
#accession A60299
#status not compared with conceptual translation
#molecule_type mRNA
#residues 1-99 ##label BOT
REFERENCE
A32300
#authors Furtani, Y.; Nomura, H.; Notake, M.; Oyanada, Y.; Fukui, T.; Yamada, M.; Larsen, C.G.; Oppenheim, J.J.; Matsushima, K.
#journal Biochem. Biophys. Res. Commun. (1989) 159:249-255
#title Cloning and sequencing of the cDNA for human monocyte chemotactic and activating factor (MCAF).
#cross-references MUID:89165862
#accession A32300
#status not compared with conceptual translation
#molecule_type mRNA
#residues 1-99 ##label FUR
#cross-references GB:M24545; NID:g187434; PID:g307163
REFERENCE
A32396
#authors Robinson, E.A.; Yoshimura, T.; Leonard, E.J.; Tanaka, S.; Griffin, P.R.; Shabanowitz, J.; Hunt, D.F.; Appella, E.
#journal Proc. Natl. Acad. Sci. U.S.A. (1989) 86:1850-1854
#title Complete amino acid sequence of a human monocyte chemoattractant, a putative mediator of cellular immune reactions.
#cross-references MUID:89184525
#accession A32396
#molecule_type protein
#residues X, 25-99 ##label ROB
REFERENCE
A34561
#authors Decock, B.; Conings, R.; Lenaerts, J.P.; Billiau, A.; Van Damme, J.
#journal Biochem. Biophys. Res. Commun. (1990) 167:904-909
#title Identification of the monocyte chemotactic protein from human osteosarcoma cells and monocytes: detection of a novel N-terminally processed form.
#cross-references MUID:90211336
#accession A34561
#molecule_type protein
#residues 29-33, 'XX', 36-52:82-92 ##label DEC
REFERENCE
I57488
#authors Li, Y.S.; Shyy, Y.J.; Wright, J.G.; Valente, A.J.; Cornhill, J.F.; Kolattukudy, P.E.
#journal Mol. Cell. Biochem. (1993) 126:61-68
#title The expression of monocyte chemotactic protein (MCP-1) in human vascular endothelium in vitro and in vivo.
#cross-references MUID:94150478
#accession I57488
#status translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-99 ##label LIY
#cross-references GB:S69738; NID:g545464; PID:g545465
REFERENCE
JCL096
#authors Ye, Q.N.; Su, G.F.; Yuan, Y.; Huang, C.F.
#journal Chinese J. Microbiol. Immunol. (1994) 14:29-32
#title The PCR, cloning and sequencing of human monocyte

```

```

#accession JCL096
#molecule_type mRNA
#residues 24-28, 'Q', 30-99 ##label YEQ

```

```

GENETICS
#gene GDB:SCYA2
#map_position 17q11.2-17q12
#cross-references GDB:125279; OMIM:158105

```

```

CLASSIFICATION
#superfamily macrophage inflammatory protein
KEYWORDS
cytokine; glycoprotein; inflammation; pyroglutamic acid
FEATURE
1-23
24-99
29-99
24
37

```

```

#domain signal sequence #status predicted #label SIG\
#product monocyte chemoattractant protein 1 #status
experimental #label MAP\
#product monocyte chemoattractant protein 1, short form
#status experimental #label MAT2\
#modified_site pyrrolidone carboxylic acid (Gln) (in
mature form) #status experimental\
#binding_site carbohydrate (Asn) (covalent) #status
predicted
SUMMARY
#length 99 #molecular-weight 11025 #checksum 7994

```

```

Query Match 100.0%; Score 84; DB 2; Length 99;
Best Local Similarity 100.0%; Pred. No. 7.50e-06;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

```

Db 75 CADPKQKWQ 84

```

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| | | | | | | |
QY 1 CADPKQKWQ 10

```

```

RESULT 2

```

```

ENTRY JC2336

```

```

TITLE monocyte chemoattractant protein-1 - bovine

```

```

ORGANISM #formal_name Bos primigenius indicus #common_name zebu cattle
DATE 20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change
03-May-1996

```

```

ACCESSIONS
JC2336

```

```

REFERENCE
JC2336

```

```

#authors Wempe, F.; Kuhlmann, J.K.; Scheit, K.H.

```

```

#journal Biochem. Biophys. Res. Commun. (1994) 202:1272-1279

```

```

#title Characterization of the bovine monocyte chemoattractant
protein-1 gene.

```

```

#cross-references MUID:94338337
#accession JC2336

```

```

#molecule_type protein
#residues 1-99 ##label WEM

```

```

GENETICS
#gene MCP-1
#introns 26/1; 65/2

```

```

CLASSIFICATION
#superfamily macrophage inflammatory protein

```

```

SUMMARY
#length 99 #molecular-weight 11114 #checksum 9401

```

```

Query Match 100.0%; Score 84; DB 2; Length 99;
Best Local Similarity 100.0%; Pred. No. 7.50e-06;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

```

Db 75 CADPKQKWQ 84

```

```

| | | | | | | |
QY 1 CADPKQKWQ 10

```

```

RESULT 3

```

```

ENTRY A39296

```

```

TITLE monocyte chemoattractant protein 1 precursor - bovine

```

```

ALTERNATE_NAMES monocyte chemotactic factor 1; seminal plasma protein p6
ORGANISM #formal_name Bos primigenius taurus #common_name cattle
DATE 03-Aug-1992 #sequence_revision 03-Aug-1992 #text_change
31-Oct-1997

```

```

ACCESSIONS
A39296; B39296

```

```

REFERENCE
A39296

```

```

#authors Wempe, F.; Henschen, A.; Scheit, K.H.

```

```

#journal DNA Cell Biol. (1991) 10:671-679

```

US-09-150-813-7.rpr

Sat Feb 5 12:04:56 2000

```

#journal Biochem. Biophys. Res. Commun. (1994) 199:962-968
#title Porcine luteal cells express monocyte chemoattractant protein-1 (MCP-1): Analysis by polymerase chain reaction and cDNA cloning.
#cross-references MUID:94183284
#accession JC2136
#molecule_type mRNA
#residues 1-99 ##label HOS
REFERENCE S57497
#authors Zach, O.
#submission submitted to the EMBL Data Library, July 1994
#accession S57498
#status preliminary
#molecule_type mRNA
#residues 1-99 ##label ZAC
#cross-references EMBL:X79416; NID:g872312; PID:g872313
KEYWORDS superfamily macrophage inflammatory protein
FEATURE 1-23
24-99 #domain signal sequence #status predicted #label SIG\
1-23 #product monocyte chemoattractant protein-1 #status
24-99 #predicted #label MAT\
94 #binding_site carbohydrate (Asn) (covalent) #status
94 #length 99 #molecular-weight 10976 #checksum 9768
SUMMARY
Query Match 98.8%; Score 83; DB 2; Length 99;
Best Local Similarity 90.0%; Pred. No. 1.23e-05;
Matches 9; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 75 CADPKOKWVQ 84
QY 1 CADPKOKWVQ 10

RESULT 4
ENTRY I46857 #type complete
TITLE monocyte chemoattractant protein-1 - rabbit
ORGANISM rabbit
DATE 14-Feb-1997 #sequence_revision 14-Feb-1997 #text_change
09-May-1997
ACCESSIONS I46857
REFERENCE Yoshimura, T.; Yuhki, N.
#authors J. Immunol. (1991) 146:3483-3488
#journal Neutrophil attractant/activation protein-1 and monocyte
#title chemoattractant protein-1 in rabbit: cDNA cloning and their
expression in spleen cells.
#cross-references MUID:91225489
#accession I46857
#status preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-125 ##label YOS
#cross-references GB:M57440; NID:g165469; PID:g165470
CLASSIFICATION #superfamily macrophage inflammatory protein
SUMMARY #length 125 #molecular-weight 13776 #checksum 4498
Query Match 100.0%; Score 84; DB 2; Length 125;
Best Local Similarity 100.0%; Pred. No. 7.50e-06;
Matches 10; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Db 75 CADPKOKWVQ 84
QY 1 CADPKOKWVQ 10

RESULT 5
ENTRY JC2136 #type complete
TITLE monocyte chemoattractant protein-1 precursor - pig
ORGANISM Sus scrofa domestica #common_name domestic pig
DATE 30-Sep-1993 #sequence_revision 20-Aug-1994 #text_change
17-Mar-1999
ACCESSIONS JC2136; S57498
REFERENCE Hosang, K.; Knoke, I.; Klaudiny, J.; Wempe, F.; Wuttke, W.;
#authors Scheit, K.H.

```

```

#journal Biochem. Biophys. Res. Commun. (1994) 199:962-968
#title Porcine luteal cells express monocyte chemoattractant protein-1 (MCP-1): Analysis by polymerase chain reaction and cDNA cloning.
#cross-references MUID:94183284
#accession JC2136
#molecule_type mRNA
#residues 1-99 ##label HOS
REFERENCE S57497
#authors Zach, O.
#submission submitted to the EMBL Data Library, July 1994
#accession S57498
#status preliminary
#molecule_type mRNA
#residues 1-99 ##label ZAC
#cross-references EMBL:X79416; NID:g872312; PID:g872313
KEYWORDS superfamily macrophage inflammatory protein
FEATURE 1-23
24-99 #domain signal sequence #status predicted #label SIG\
1-23 #product monocyte chemoattractant protein-1 #status
24-99 #predicted #label MAT\
94 #binding_site carbohydrate (Asn) (covalent) #status
94 #length 99 #molecular-weight 10976 #checksum 9768
SUMMARY
Query Match 98.8%; Score 83; DB 2; Length 99;
Best Local Similarity 90.0%; Pred. No. 1.23e-05;
Matches 9; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 75 CADPKOKWVQ 84
QY 1 CADPKOKWVQ 10

RESULT 6
ENTRY I48099 #type complete
TITLE eotaxin precursor - guinea pig
ORGANISM #formal_name Cavia porcellus #common_name guinea pig
DATE 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change
09-May-1997
ACCESSIONS I48099
REFERENCE Rothenberg, M.E.; Luster, A.D.; Lilly, C.M.; Drazen, J.M.;
#authors J. Exp. Med. (1995) 181:1211-1216
#journal Constitutive and allergen-induced expression of eotaxin mRNA
#title in the guinea pig lung.
#cross-references MUID:95173589
#accession I48099
#status preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-96 ##label RES
#cross-references EMBL:U18941; NID:g687655; PID:g687656
CLASSIFICATION #superfamily macrophage inflammatory protein
SUMMARY #length 96 #molecular-weight 10753 #checksum 7236
Query Match 91.7%; Score 77; DB 2; Length 96;
Best Local Similarity 90.0%; Pred. No. 2.34e-04;
Matches 9; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Db 72 CADPKKKWVQ 81
QY 1 CADPKKKWVQ 10

RESULT 7
ENTRY JC2478 #type complete
TITLE eotaxin precursor - rat
ORGANISM #formal_name Rattus norvegicus #common_name Norway rat
DATE 21-Feb-1995 #sequence_revision 05-Apr-1995 #text_change
17-Mar-1999
ACCESSIONS JC2478

```

```

REFERENCE JC2478
#authors Jose, P.J.; Adcock, I.M.; Griffiths-Johnson, D.A.; Berkman, N.; Wells, T.N.C.; Williams, T.J.; Power, C.A.
#journal Biochem. Biophys. Res. Commun. (1994) 205:788-794
#title Eotaxin: Cloning of an eosinophil chemoattractant cytokine and increased mRNA expression in allergen-challenged guinea-pig lungs.
#cross-references MUID:95091818
#accession JC2478
##molecule_type mRNA
##residues 1-96 ##label JOS
##cross-references EMBL:X77603; NID:G602551; PID:G602552
COMMENT This protein is identified as a potent eosinophil chemoattractant.
CLASSIFICATION #superfamily macrophage inflammatory protein glycoprotein
KEYWORDS 1-23
24-96
93
SUMMARY #domain signal sequence #status predicted #label SIG\
#product eotaxin #status predicted #label MAR\
#binding_site carbohydrate (Thr) (covalent) #status predicted
#length 96 #molecular-weight 10695 #checksum 7329
Query Match 91.7%; Score 77; DB 2; Length 96;
Best Local Similarity 90.0%; Pred. No. 2.34e-04;
Matches 9; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Db 72 CADPKKKWVQ 81
Qy 1 CADPKQKWVQ 10

RESULT 8
ENTRY JC2417
TITLE monocyte chemoattractant protein-2 precursor - pig
ORGANISM #formal_name Sus scrofa domestica #common_name domestic pig
DATE 24-Feb-1995 #sequence_revision 24-Feb-1995 #text_change 17-Mar-1999
ACCESSIONS JC2417
REFERENCE Hosang, K.; Knoke, I.; Klaudiny, J.; Wempe, F.; Wuttke, W.; Scheit, K.H.
#authors Biochem. Biophys. Res. Commun. (1994) 205:148-153
#journal Porcine luteal cells express monocyte chemoattractant protein-2 (MCP-2): Analysis by cDNA cloning and northern analysis.
#cross-references MUID:95091716
#accession JC2417
##molecule_type mRNA
##residues 1-99 ##label HOS
##experimental_source corpus luteum
CLASSIFICATION #superfamily macrophage inflammatory protein
FEATURE 1-23
24-99
SUMMARY #domain signal sequence #status predicted #label SIG\
#product monocyte chemoattractant protein-2 #status predicted #label MAR
#length 99 #molecular-weight 10903 #checksum 7556
Query Match 91.7%; Score 77; DB 2; Length 99;
Best Local Similarity 90.0%; Pred. No. 2.34e-04;
Matches 9; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Db 75 CADPQOKWVQ 84
Qy 1 CADPKQKWVQ 10

RESULT 9
ENTRY A54678
TITLE monocyte chemoattractant protein 3 precursor - human
ALTERNATE_NAMES monocyte chemoattractant protein MCP-3
ORGANISM #formal_name Homo sapiens #common_name man
DATE 28-Oct-1994 #sequence_revision 28-Oct-1994 #text_change 17-Mar-1999
#cross-references MUID:93213290
#accession JC1478
##molecule_type DNA
##residues 1-109 ##label OPD
##cross-references GB:X72309
REFERENCE Opendakker, G.; Froyen, G.; Fiten, P.; Proost, P.; Van Damme, J.
#authors Biochem. Biophys. Res. Commun. (1993) 191:535-542
#journal Human monocyte chemotactic protein-3 (MCP-3): Molecular cloning of the cDNA and comparison with other chemokines.
#cross-references MUID:93213290
#accession JC1478
##molecule_type mRNA
##residues 1-109 ##label OP2
REFERENCE Minty, A.; Chalon, P.; Guillemot, J.C.; Kaghad, M.; Liauzun, P.; Magazin, M.; Miloux, B.; Minty, C.; Ramond, P.; Vita, N.; Lupker, J.; Shire, D.; Ferrara, P.; Caput, D.
#authors Submitted to the EMBL Data Library, March 1993
#description Molecular cloning of MCP-3: a human monocyte-derived monocyte chemoattractant protein.
#accession S32222
##molecule_type mRNA
##residues 1-109 ##label MIN
COMMENT This protein induces proteinase secretion and chemotaxis by macrophages and monocytes.
GENETICS GDB:SCYA7; SCYA6; MCP-3
#map_position 17q11-17q12
#introns 36/1; 75/2
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS cytokine; glycoprotein; inflammation
FEATURE 1-33
34-109
39
SUMMARY #domain signal sequence #status predicted #label SIG\
#product monocyte chemotactic protein 3 #status predicted #label MAR\
#binding_site carbohydrate (Asn) (covalent) #status predicted
#length 109 #molecular-weight 12356 #checksum 1535
Query Match 91.7%; Score 77; DB 2; Length 109;
Best Local Similarity 90.0%; Pred. No. 2.34e-04;
Matches 9; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Db 85 CADPTQKWVQ 94
Qy 1 CADPKQKWVQ 10

RESULT 10
ENTRY I48147
TITLE monocyte chemoattractant protein-1 - guinea pig
ORGANISM #formal_name Cavia porcellus #common_name guinea pig
DATE 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 09-May-1997
#accessions I48147
#reference I48147
#authors Yoshimura, T.
#journal J. Immunol. (1993) 150:5025-5032
#title cDNA cloning of guinea pig monocyte chemoattractant protein-1 and expression of the recombinant protein.
#cross-references MUID:93267104

```

US-09-150-813-7.rpr

Sat Feb 5 12:04:56 2000

```

#accession I48147 preliminary; translated from GB/EMBL/DDBJ
#status
#molecule_type mRNA
#residues 1-120 ##label RES
#cross-references GB:L04985; NID:g349820; PID:g349821
GENETICS MCP-1
#gene
#superfamily macrophage inflammatory protein
CLASSIFICATION #length 120 #molecular-weight 13741 #checksum 9252
SUMMARY
Query Match 91.7%; Score 77; DB 2; Length 120;
Best Local Similarity 90.0%; Pred. No. 2.34e-04;
Matches 9; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 73 CADPQKQWVQ 82
|||||
Qy 1 CADPQKQWVQ 10

RESULT 11
ENTRY JN0812 #type complete
TITLE eotaxin precursor - human
ORGANISM #formal_name Homo sapiens #common_name man
DATE 01-Nov-1996 #sequence_revision 01-Nov-1996 #text_change
13-Nov-1998
ACCESSIONS JN0812
REFERENCE Bartels, J.; Schlueter, C.; Richter, E.; Noso, N.; Kulke, R.;
Christophers, E.; Schroeder, J.M.
#journal Biochem. Biophys. Res. Commun. (1996) 225:1045-1051
#title Human dermal fibroblasts express eotaxin: Molecular cloning,
mRNA expression, and identification of eotaxin sequence
variants.
#accession JN0812
#status preliminary
#molecule_type mRNA
#residues 1-97 ##label BAR
#cross-references EMBL:275668; NID:g1531982; PID:e251275; PID:g1531983
#experimental_source dermal fibroblast
#comment This protein has eosinophil specific chemotactic activity.
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS fibroblast
FEATURE
1-18 #domain signal sequence #status predicted #label SIG\
19-97 #product eotaxin #status predicted #label MAT
#length 97 #molecular-weight 10790 #checksum 448
SUMMARY
Query Match 88.1%; Score 74; DB 2; Length 97;
Best Local Similarity 80.0%; Pred. No. 9.86e-04;
Matches 8; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 73 CADPQKQWVQ 82
|||||
Qy 1 CADPQKQWVQ 10

RESULT 12
ENTRY I52322 #type complete
TITLE macrophage inflammatory protein-lalpha - rat
ORGANISM #formal_name Rattus norvegicus #common_name Norway rat
DATE 29-May-1998 #sequence_revision 29-May-1998 #text_change
02-Jul-1998
ACCESSIONS I52322
REFERENCE Sh., M.M.; Godleski, J.J.; Paulauskis, J.D.
#authors Biochem. Biophys. Res. Commun. (1995) 211:289-295
#journal Molecular cloning and posttranscriptional regulation of
#title macrophage inflammatory protein-1 alpha in alveolar
macrophages.
#cross-references MUID:95298037
#accession I52322 preliminary; translated from GB/EMBL/DDBJ
#status
#molecule_type mRNA

```

```

#residues 1-92 ##label RES
#cross-references EMBL:U22414; NID:g790632; PID:g790633
CLASSIFICATION #superfamily macrophage inflammatory protein
SUMMARY #length 92 #molecular-weight 10335 #checksum 3184

Query Match 86.9%; Score 73; DB 2; Length 92;
Best Local Similarity 80.0%; Pred. No. 1.58e-03;
Matches 8; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 73 CADPQKQWVQ 82
|||||
Qy 1 CADPQKQWVQ 10

RESULT 13
ENTRY JN0841 #type complete
TITLE interleukin-8 - dog
ORGANISM #formal_name Canis lupus familiaris #common_name dog
DATE 19-May-1994 #sequence_revision 19-May-1994 #text_change
12-Apr-1995
ACCESSIONS JN0841
REFERENCE Ishikawa, J.; Suzuki, S.; Hotta, K.; Hirota, Y.; Mizuno, S.;
Suzuki, K.
#journal Gene (1993) 131:305-306
#title Cloning of a canine gene homologous to the human
interleukin-8-encoding gene.
#cross-references MUID:94010328
#accession JN0841
#molecule_type DNA
#residues 1-95 ##label ISH
#comment This protein is a polymorphonuclear leukocytes chemotactic factor
and is involved in the host defense function.
GENETICS
#introns 22/1; 67/2
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 95 #molecular-weight 10611 #checksum 3157

Query Match 86.9%; Score 73; DB 2; Length 95;
Best Local Similarity 80.0%; Pred. No. 1.58e-03;
Matches 8; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 77 CLDPKQKQWVQ 86
|||||
Qy 1 CADPQKQWVQ 10

RESULT 14
ENTRY I46871 #type complete
TITLE interleukin-8 - rabbit
ALTERNATE_NAMES neutrophil attractant/activation protein-1
ORGANISM #formal_name Oryctolagus cuniculus #common_name domestic
rabbit
DATE 14-Feb-1997 #sequence_revision 14-Feb-1997 #text_change
09-Aug-1997
ACCESSIONS I46871; S13052
REFERENCE Yoshimura, T.; Yuhki, N.
#authors J. Immunol. (1991) 146:3483-3488
#journal Neutrophil attractant/activation protein-1 and monocyte
#title chemoattractant protein-1 in rabbit: cDNA cloning and their
expression in spleen cells.
#cross-references MUID:91225489
#accession I46871 preliminary; translated from GB/EMBL/DDBJ
#status
#molecule_type mRNA
#residues 1-101 ##label YOS
#cross-references GB:M57439; NID:g165552; PID:g165553
REFERENCE S13052
#authors Beaubien, B.C.; Collins, P.D.; Jose, P.J.; Totty, N.F.;
Hsuan, J.; Waterfield, M.D.; Williams, T.J.
#journal Biochem. J. (1990) 271:797-801
#title A novel neutrophil chemoattractant generated during an

```

inflammatory reaction in the rabbit peritoneal cavity in vivo. Purification, partial amino acid sequence and structural relationship to interleukin 8.

#cross-references MUID:91058518
#accession S13052

##molecule_type protein
##residues 23-33,'X',35,'X',37-46,'X',48-49,'I',51-53 ##label BEA
CLASSIFICATION #superfamily beta-thromboglobulin
KEYWORDS cytokine
SUMMARY #length 101 #molecular-weight 11402 #checksum 1085

Query Match 86.9%; Score 73; DB 2; Length 101;
Best Local Similarity 80.0%; Pred. No. 1.58e-03;
Matches 8; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 77 CLDPKRWQ 86
QY 1 CDPKRWQ 10

RESULT 15

ENTRY I46997 #type complete
TITLE interleukin-8 - sheep
ORGANISM #formal_name Ovis sp. #common_name sheep
DATE 21-Feb-1997 #sequence_revision 21-Feb-1997 #text_change 09-May-1997
ACCESSIONS I46997
REFERENCE I46997
#authors Seow, H.F.; Yoshimura, T.; Wood, P.R.; Colditz, I.G.
#journal Immunol. Cell Biol. (1994) 72:398-405
#title Cloning, sequencing, expression and inflammatory activity in skin of ovine interleukin-8.
#cross-references MUID:95137691
#accession I46997

##status preliminary; translated from GB/EMBL/DBJ
##molecule_type mRNA
##residues 1-101 ##label SEO
##cross-references GB:S74436; NID:g786590; PID:g786591

GENETICS

#gene oIL-8
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 101 #molecular-weight 11292 #checksum 294

Query Match 86.9%; Score 73; DB 2; Length 101;
Best Local Similarity 80.0%; Pred. No. 1.58e-03;
Matches 8; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 77 CLDPKRWQ 86
QY 1 CDPKRWQ 10

Search completed: Fri Feb 4 16:59:05 2000
Job time : 16 secs.

Sat Feb 5 15:13:43 2000

 M P E R E H
 (TM)

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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm
 Run on: Fri Feb 4 16:53:42 2000; MasPar time 3.53 Seconds
 Tabular output not generated. 72.208 Million cell updates/sec

Title: >US-09-150-813-1
 Description: (1-12) from US09150813.pep
 Perfect Score: 97
 Sequence: 1 ETCADPKQKVVQ 12

Scoring table: PAM 150
 Gap 15

Searched: 170751 seqs, 21266608 residues

Post-processing: Minimum Match 0%
 Listing first 45 summaries

Database: a-geneseq35
 1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
 8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
 14:part14 15:part15 16:part16 17:part17 18:part18
 19:part19 20:part20 21:part21 22:part22 23:part23
 24:part24 25:part25 26:part26 27:part27 28:part28
 29:part29 30:part30 31:part31 32:part32 33:part33
 34:part34 35:part35 36:part36 37:part37 38:part38
 39:part39

Statistics: Mean 18.469; Variance 64.805; scale 0.285

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description	Pred. No.
1	97	100.0	66	24	Monocyte chemoattractant	7.70e-03
2	97	100.0	67	24	Monocyte chemoattractant	7.70e-03
3	97	100.0	68	24	Monocyte chemoattractant	7.70e-03
4	97	100.0	69	24	Monocyte chemoattractant	7.70e-03
5	97	100.0	70	24	des(2-8) MCP-1.	7.70e-03
6	97	100.0	76	20	Monocyte chemoattractant	7.70e-03
7	97	100.0	76	14	Peptide from human gl	7.70e-03
8	97	100.0	76	14	(28-Asp) MCP-1.	7.70e-03
9	97	100.0	76	21	Mature human monocyte	7.70e-03
10	97	100.0	76	5	MCP.	7.70e-03
11	97	100.0	76	5	(3-Ala) MCP-1.	7.70e-03
12	97	100.0	76	30	Macrophage chemoattractant	7.70e-03
13	97	100.0	76	10	Sense MCP-1.	7.70e-03
14	97	100.0	76	14	Monocyte chemoattractant	7.70e-03
15	97	100.0	76	14	(24-Arg) MCP-1.	7.70e-03
16	97	100.0	77	15	Mature MCP-1.	7.70e-03

17	97	100.0	99	2	P95387	Human monocyte chemo-	7.70e-03
18	97	100.0	99	14	R73914	Human monocyte chemo	7.70e-03
19	97	100.0	99	13	R70800	Chemoattractant prote	7.70e-03
20	97	100.0	99	30	W40174	Macrophage chemoattra	7.70e-03
21	97	100.0	99	5	R28663	MCF.	2.03e-02
22	93	95.9	71	26	W22675	Droi3+ chemokine beta	2.03e-02
23	93	95.9	75	31	W56690	Chemokine MCP-4 prote	2.03e-02
24	93	95.9	75	26	W22673	Bac 3 chemokine beta1	2.03e-02
25	93	95.9	77	26	W22672	Bac 2 chemokine beta1	2.03e-02
26	93	95.9	79	26	W22674	Droi1/2 chemokine bet	2.03e-02
27	93	95.9	82	26	W22671	Bac 1 chemokine beta1	2.03e-02
28	93	95.9	82	26	W17665	Stem cell mobilising	2.03e-02
29	93	95.9	98	31	W56087	Human monocyte chemo	2.03e-02
30	93	95.9	98	17	R33087	Human chemokine beta-	2.03e-02
31	93	95.9	98	28	W30191	Monocyte chemoattract	2.03e-02
32	93	95.9	98	26	W22670	Human chemokine beta1	2.03e-02
33	93	95.9	99	2	R06398	Human MCF precursor.	2.03e-02
34	92	94.8	76	5	R26580	Sequence of bovine P6	2.58e-02
35	92	94.8	99	5	R26581	Sequence of P6 precu	2.58e-02
36	90	92.8	67	14	R73915	Human monocyte chemo	4.17e-02
37	90	92.8	99	13	R70801	Chemoattractant prote	4.17e-02
38	90	92.8	109	2	R24353	Cytokine encoded by c	5.29e-02
39	89	91.8	82	29	W44721	Amino acid sequence o	5.29e-02
40	89	91.8	97	23	W10099	Human eosinophil.	5.29e-02
41	89	91.8	97	24	W14990	Human eosinocyte CC t	5.29e-02
42	89	91.8	97	21	W00667	Pancreas expressed ch	5.29e-02
43	86	88.7	104	31	W56088	Murine monocyte chemo	1.08e-01
44	86	88.7	104	31	W57322	Mouse monocyte chemot	1.08e-01
45	84	86.6	96	24	W14991	Guinea pig eosinocyte	1.74e-01

ALIGNMENTS

RESULT 1
 ID W13598 standard; peptide; 66 AA.
 AC W13598;
 DT 07-NOV-1997 (first entry)
 DE Monocyte chemoattractant protein analogue MCP-1 (10-76).
 KW Truncated monocyte chemoattractant protein-1; inhibitor;
 KW receptor binding; anti-inflammatory; basophil; lymphocyte; allergy;
 KW chronic inflammatory disease; arthritis; arteriosclerosis;
 KW lung disease.
 OS Homo sapiens.
 PN CA2152141-A.
 PD 20-DEC-1996.
 PF 19-JUN-1995; 152141.
 PR 19-JUN-1995; CA-152141.
 PA (LEWIS) LEWIS I.
 PI Gong J, Lewis I;
 DR WPI: 97-165844/16.
 PT N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) -
 PT lacks MCP-1 activity and inhibits receptor binding, useful as
 PT anti-inflammatory agent
 PS Disclosure: Page 5; 27pp: English.
 CC The present sequence represents an analogue, MCP-1 (10-76), of monocyte
 CC chemoattractant protein-1 (MCP-1). The analogue, which lacks the
 CC N-terminal amino acids 1-9 of MCP-1, acts as an antagonist of MCP-1
 CC as it lacks MCP-1 biological activity and inhibits binding to a MCP-1
 CC receptor. The analogue is useful as an anti-inflammatory agent to block
 CC the effects of MCP-1 which is an inflammatory mediator causing migration
 CC of monocytes and other cells e.g. basophils and lymphocytes into
 CC inflammatory sites. MCP-1 has been implicated in allergic and chronic
 CC inflammatory diseases e.g. arthritis, arteriosclerosis and several lung
 CC diseases. The analogue competes more effectively with MCP-1 for binding
 CC MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably
 CC providing 50% inhibition of binding at a 25:1 ratio or less, compared
 CC with 75:1 for prior art mutant 7ND.
 CC Sequence 66 AA;
 SQ Query Match 100.0%; Score 97; DB 24; Length 66;
 Best Local Similarity 100.0%; Pred. No. 7.70e-03; Indels 0; Gaps 0;
 Matches 12; Conservative 0; Mismatches 0;

Db 40 eicadpkqkwwq 51
 |||||
 QY 1 EICADPKQKWWQ 12

RESULT

ID W13597 standard; peptide; 67 AA.
 AC W13597;
 DT 07-NOV-1997 (first entry)
 DE Monocyte chemoattractant protein analogue MCP-1 (11-76).
 KW Truncated monocyte chemoattractant protein-1; inhibitor;
 KW receptor binding; anti-inflammatory; basophil; lymphocyte; allergy;
 KW chronic inflammatory disease; arthritis; arteriosclerosis;
 KW lung disease.
 OS Homo sapiens.
 PN CA2152141-A.
 PD 20-DEC-1996.
 PF 19-JUN-1995; 152141.
 PR 19-JUN-1995; CA-152141.
 PA (LEWIS/) LEWIS I.
 PI Gong J, Lewis I;
 DR WPI; 97-165844/16.
 PT N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) -
 PT lacks MCP-1 activity and inhibits receptor binding, useful as
 PT anti-inflammatory agent
 PS Disclosure; Page 5; 27pp; English.
 CC The present sequence represents an analogue, MCP-1 (11-76), of monocyte
 CC chemoattractant protein-1 (MCP-1). The analogue, which lacks the
 CC N-terminal amino acids 1-10 of MCP-1, acts as an antagonist of MCP-1
 CC as it lacks MCP-1 biological activity and inhibits binding to a MCP-1
 CC receptor. The analogue is useful as an anti-inflammatory agent to block
 CC the effects of MCP-1 which is an inflammatory mediator causing migration
 CC of monocytes and other cells e.g. basophils and lymphocytes into
 CC inflammation sites. MCP-1 has been implicated in allergic and chronic
 CC inflammatory diseases e.g. arthritis, arteriosclerosis and several lung
 CC diseases. The analogue competes more effectively with MCP-1 for binding
 CC MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably
 CC providing 50% inhibition of binding at a 25:1 ratio or less, compared
 CC with 75:1 for prior art mutant 7ND.
 SQ Sequence 67 AA;

Query Match 100.0%; Score 97; DB 24; Length 67;
 Best Local Similarity 100.0%; Pred. No. 7,70e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 41 eicadpkqkwwq 52
 |||||
 QY 1 EICADPKQKWWQ 12

RESULT

ID W13597 standard; peptide; 68 AA.
 AC W13597;
 DT 07-NOV-1997 (first entry)
 DE Monocyte chemoattractant protein analogue MCP-1 (9-76).
 KW Truncated monocyte chemoattractant protein-1; inhibitor;
 KW receptor binding; anti-inflammatory; basophil; lymphocyte;
 KW chronic inflammatory disease; arthritis; arteriosclerosis;
 KW lung disease.
 OS Homo sapiens.
 PN CA2152141-A.
 PD 20-DEC-1996.
 PF 19-JUN-1995; 152141.
 PR 19-JUN-1995; CA-152141.
 PA (LEWIS/) LEWIS I.
 PI Gong J, Lewis I;
 DR WPI; 97-165844/16.
 PT N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) -
 PT lacks MCP-1 activity and inhibits receptor binding, useful as
 PT anti-inflammatory agent
 PS Claim 7; Page 5; 27pp; English.
 CC The present sequence represents an analogue, MCP-1 (9-76), of monocyte
 CC chemoattractant protein-1 (MCP-1). The analogue, which lacks the

CC N-terminal amino acids 1-8 of MCP-1, acts as an antagonist of MCP-1
 CC as it lacks MCP-1 biological activity and inhibits binding to a MCP-1
 CC receptor. The analogue is useful as an anti-inflammatory agent to block
 CC the effects of MCP-1 which is an inflammatory mediator causing migration
 CC of monocytes and other cells e.g. basophils and lymphocytes into
 CC inflammation sites. MCP-1 has been implicated in allergic and chronic
 CC inflammatory diseases e.g. arthritis, arteriosclerosis and several lung
 CC diseases. The analogue competes more effectively with MCP-1 for binding
 CC MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably
 CC providing 50% inhibition of binding at a 25:1 ratio or less, compared
 CC with 75:1 for prior art mutant 7ND.
 SQ Sequence 68 AA;

Query Match 100.0%; Score 97; DB 24; Length 68;
 Best Local Similarity 100.0%; Pred. No. 7,70e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 42 eicadpkqkwwq 53
 |||||
 QY 1 EICADPKQKWWQ 12

RESULT

ID W13596 standard; peptide; 69 AA.
 AC W13596;
 DT 07-NOV-1997 (first entry)
 DE Monocyte chemoattractant protein analogue MCP-1 (8-76).
 KW Truncated monocyte chemoattractant protein-1; inhibitor;
 KW receptor binding; anti-inflammatory; basophil; lymphocyte; allergy;
 KW chronic inflammatory disease; arthritis; arteriosclerosis;
 KW lung disease.
 OS Homo sapiens.
 PN CA2152141-A.
 PD 20-DEC-1996.
 PF 19-JUN-1995; 152141.
 PR 19-JUN-1995; CA-152141.
 PA (LEWIS/) LEWIS I.
 PI Gong J, Lewis I;
 DR WPI; 97-165844/16.
 PT N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) -
 PT lacks MCP-1 activity and inhibits receptor binding, useful as
 PT anti-inflammatory agent
 PS Claim 5; Page 5; 27pp; English.
 CC The present sequence represents an analogue, MCP-1 (8-76), of monocyte
 CC chemoattractant protein-1 (MCP-1). The analogue, which lacks the
 CC N-terminal amino acids 1-7 of MCP-1, acts as an antagonist of MCP-1
 CC as it lacks MCP-1 biological activity and inhibits binding to a MCP-1
 CC receptor. The analogue is useful as an anti-inflammatory agent to block
 CC the effects of MCP-1 which is an inflammatory mediator causing migration
 CC of monocytes and other cells e.g. basophils and lymphocytes into
 CC inflammation sites. MCP-1 has been implicated in allergic and chronic
 CC inflammatory diseases e.g. arthritis, arteriosclerosis and several lung
 CC diseases. The analogue competes more effectively with MCP-1 for binding
 CC MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably
 CC providing 50% inhibition of binding at a 25:1 ratio or less, compared
 CC with 75:1 for prior art mutant 7ND.
 SQ Sequence 69 AA;

Query Match 100.0%; Score 97; DB 24; Length 69;
 Best Local Similarity 100.0%; Pred. No. 7,70e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 43 eicadpkqkwwq 54
 |||||
 QY 1 EICADPKQKWWQ 12

RESULT

ID R87678 standard; protein; 69 AA.
 AC R87678;
 DT 21-FEB-1996 (first entry)
 DE des(2-8) MCP-1.
 KW monocyte chemoattractant protein; MCP-1; mutant; restenosis;

US-09-150-813-1.1.rag

Sat_Feb 5 15:13:43 2000

angioplasty.
 Homo sapiens.
 Key modified_site Location/Qualifiers
 2..3 /note= "amino acids 2-8 of the native protein have been deleted between these residues"
 disulfide_bond 4..29
 disulfide_bond 5..45
 W0513295-A1.
 18-MAY-1995.
 PD 07-NOV-1994; U12874.
 PF 12-NOV-1993; US-152301.
 PR (DAND) DANA FARBEN CANCER INST INC.
 PA Rollins B, Zhang YJ;
 PI WPI; 95-215051/28.
 DR Human monocyte chemo-attractant protein-1 (MCP-1) derivs. - are capable of inhibiting the monocyte chemo-attractant activity of endogenous MCP-1 and can be used to treat restenosis
 PT Claim 4; Page 11; 22pp; English.
 PS Monocyte chemoattractant protein-1 (MCP-1) derivatives are mutated such that they inhibit the monocyte chemoattractant activity of endogenous MCP-1, provided that the derivative has not been modified by the substitution of 28-Tyr by Leu and/or 30-Arg by Val. Preferred mutations are: (1) substitution of 28 Tyr by aspartate; (2) substitution of 24 Arg by Phe; (3) substitution of 3-Asp by Ala; and/or (4) deletion of amino acids 2-8. The present sequence is a specifically claimed human MCP-1 derivative based on the parent protein disclosed in Rollins, Molecular and Cellular Biology, Vol. 9, No. 11, pp. 4687-4695, Nov. 1989.
 CC The peptides can be used to prevent restenosis, e.g. in patients undergoing coronary artery angioplasty.
 CC Sequence 69 AA;
 SQ

Query Match 100.0%; Score 97; DB 14; Length 69;
 Best Local Similarity 100.0%; Pred. No. 7.70e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 43 eicadpkqkvq 54
 |||||
 Qy 1 EICADPKQKQWQ 12

RESULT 6
 ID W09374 standard; Protein; 76 AA.
 AC W09374;
 DT 21-MAR-1997 (first entry)
 DE Monocyte chemoattractant protein 1.
 KW Human; monocyte chemoattractant protein; antisense; inhibition;
 KW mononuclear cell; lymphocyte; macrophage; smooth muscle cell;
 KW vascular restenosis.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT misc_difference 1 /note= "encoded by codon CAG"
 FT misc_difference 51 /note= "encoded by codon AUG"
 FT misc_difference 65 /note= "encoded by codon CAC"
 FT US5571713-A.
 PN 05-NOV-1996.
 PD 22-OCT-1992; 965678.
 PF 22-OCT-1992; US-965678.
 PR 27-MAY-1994; US-250958.
 PA (UNMI) UNIV MICHIGAN.
 PI Kunkel SL, Lytle LR, Strieter RM;
 DR WPI; 96-505405/50.
 DR N-PSDB; T48092.
 DR Anti-sense Monocyte Chemoattractant Protein-1 oligo:nucleotide(s) - useful for therapy or diagnosis of restenosis, etc.
 PT Disclosure; Column 13-14; 16pp; English.
 PS This is the amino acid sequence of the human monocyte chemoattractant protein (MCP-1), a member of the C-C chemokine family. MCP-1 is a potent stimulator of monocyte chemotaxis and is produced by injured vascular smooth cells thus attracting monocytes and macrophages which infiltrate

the injured area and release growth factor. This causes proliferation of the vascular smooth cells resulting in restenosis. The gene sequence can be used to generate antisense sequences e.g. T48093-7, which can be used to inhibit in vitro MCP-1 prodn. by mononuclear cells e.g. lymphocytes or macrophages, or smooth muscle cells, esp. in order to prevent vascular restenosis.
 CC Sequence 76 AA;
 SQ

Query Match 100.0%; Score 97; DB 20; Length 76;
 Best Local Similarity 100.0%; Pred. No. 7.70e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 50 eicadpkqkvq 61
 |||||
 Qy 1 EICADPKQKQWQ 12

RESULT 7
 ID P90292 standard; peptide; 76 AA.
 AC P90292;
 DT 17-JAN-1990 (first entry)
 DE Peptide from human glioma cell line U-105MG.
 KW Glioma; leucocyte; chemotaxis; neoplasms.
 OS Human.
 FH Key Location/Qualifiers
 FT modified_site 1 /label= OTHER
 FT /note= "pyroglutamic acid"
 FT US7304234-A.
 PN 20-JUL-1989.
 PD 31-JAN-1989; 030423.
 PR 31-JAN-1989; US-304234.
 PA (USSH) US Dept. of Health and Human.
 PI Yoshimura T; Robinson E; Appella E.
 DR WPI; 89-263501/36.
 DT New peptide with specific chemotactic activity for monocytes - isolated from glioma or leucocyte cells, useful for treating infections and neoplasms.
 PT neoplasms.
 PS Disclosure; page 3; 46pp; English.
 CC Peptide is derived from glioma cell line U-105MG (ATCC CRL9932) or from leukocytes and has mol. wt. 8400. Used to treat infections and neoplasms.
 CC Sequence 76 AA;
 SQ

Query Match 100.0%; Score 97; DB 1; Length 76;
 Best Local Similarity 100.0%; Pred. No. 7.70e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 50 eicadpkqkvq 61
 |||||
 Qy 1 EICADPKQKQWQ 12

RESULT 8
 ID R87675 standard; protein; 76 AA.
 AC R87675;
 DT 21-FEB-1996 (first entry)
 DE (28-ASP) MCP-1.
 KW monocyte chemoattractant protein; MCP-1; mutant; restenosis;
 KW angioplasty.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT modified_site 28 /note= "Tyr in the native sequence is replaced by Asp"
 FT disulfide_bond 11..36
 FT disulfide_bond 12..52
 FT W09513295-A1.
 PN W09513295-A1.
 PD 18-MAY-1995.
 PF 07-NOV-1994; U12874.
 PR 12-NOV-1993; US-152301.
 PA (DAND) DANA FARBEN CANCER INST INC.
 PI Rollins B, Zhang YJ;
 DR WPI; 95-215051/28.
 DR Human monocyte chemo-attractant protein-1 (MCP-1) derivs. - are

PT capable of inhibiting the monocyte chemo-attractant activity of
 PS endogenous MCP-1 and can be used to treat restenosis
 CC Claim 3; Page 11; 22pp; English.
 CC Monocyte chemoattractant protein-1 (MCP-1) derivatives are mutated such
 CC that they inhibit the monocyte chemoattractant activity of endogenous
 CC MCP-1, provided that the derivative has not been modified by the
 CC substitution of 28-Tyr by Leu and/or 30-Arg by Val. Preferred mutations
 CC are: (1) substitution of 28 Tyr by aspartate; (2) substitution of 24 Arg
 CC acids 2-8. The present sequence is a specifically claimed human MCP-1
 CC derivative based on the parent protein disclosed in Rollins, Molecular
 CC and Cellular Biology, Vol. 9, No. 11, pp. 4687-4695, Nov. 1989.
 CC The peptides can be used to prevent restenosis, e.g. in patients
 CC undergoing coronary artery angioplasty.
 SQ Sequence 76 AA;

Query Match 100.0%; Score 97; DB 14; Length 76;
 Best Local Similarity 100.0%; Pred. No. 7.70e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Db 50 eicadpkqkwvq 61
 QY 1 EICADPKQKWVQ 12

RESULT 9
 ID W11131 standard; protein; 76 AA.
 AC W11131;
 DT 10-JUN-1997 (first entry)
 DE Mature human monocyte chemoattractant protein-1 (MCP-1).
 KW MCP-1; mature chemoattractant protein-1; cytokine; interleukin-8;
 KW IL-8; neutrophil activating peptide; labelling; imaging; targeting;
 KW radionuclide; infection; inflammation; neoplasm; atheromatous lesion;
 KW restenosis.
 OS Homo sapiens.
 FH Key
 FT misc_difference 1
 FT Location/Qualifiers

PN US5605671-A.
 PD 25-FEB-1997.
 PF 05-OCT-1992; 956862.
 PR 05-OCT-1992; US-956863.
 PR 05-OCT-1992; US-956862.
 PR 29-APR-1994; US-235659.
 PA (MCLW) MALLINCKRODT MEDICAL INC.
 PA (UNMI) UNIV MICHIGAN.
 PI Kunkel SL, Lyle LR, Strieter RM;
 DR WPI; 97-153541/14.

PT Radio:labelling neutrophil-activating peptide(s) - for imaging
 PT targeted delivery of radioactive agent
 PS Example 10: Column 19-20; 19pp; English.
 CC W11131 represents mature human monocyte chemoattractant protein-1
 CC (MCP-1). MCP-1 was radionuclide labelled and used in a method for
 CC imaging a target site in vivo in an animal. Labelled MCP-1 was allowed
 CC to accumulate at a target site (having MCP-1 receptors) in the animal
 CC and detected so as to image the target site. Any Cys-Cys or Cys-Xaa-Cys
 CC chemokine carrying either iodine-123 or iodine-131 can be used in the
 CC method. Especially preferred is neutrophil activating peptide-2 (NAP-2)
 CC which recognises interleukin-8 receptors and is labelled with
 CC technetium-99m, indium-111, copper-62, rhenium-186 or rhenium-188.
 CC The method can be used for imaging a site of infection, inflammation,
 CC neoplasm, atheromatous lesion or restenosis.
 SQ Sequence 76 AA;

Query Match 100.0%; Score 97; DB 21; Length 76;
 Best Local Similarity 100.0%; Pred. No. 7.70e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Db 50 eicadpkqkwvq 61
 QY 1 EICADPKQKWVQ 12

RESULT 10
 ID R28660 standard; Protein; 76 AA.
 AC R28660;
 DT 24-MAR-1993 (first entry)
 DE MCP-1.
 KW Plasmid; monocyte chemotactic factor; MCP; translation;
 KW termination; terminator; initiation; initiation; ribosome binding site;
 KW RBS; promoter; tryptophan; repressor.
 OS Synthetic.
 PN W09219737-A.
 PD 12-NOV-1992.
 PF 27-APR-1992; J00550.
 PR 09-MAY-1991; JP-135950.
 PA (DAIN) DAINIPPON PHARM CO LTD.
 PI Fukui T, Matsuo N, Yamada M, Yamagishi J;
 DR WPI; 92-398864/48.
 DR N-PSDB; 030745-46.
 PT Prodn. of polypeptide(s) having monocyte chemotactic activity -
 PT using expression plasmids with E. coli elements and specific
 PS E.coli strains
 CC Claim 1; Page 48 + Page 36; 56pp; English.
 CC An expression plasmid, pHM483, for producing MCP(76) consisting
 CC of 76 amino acids was constructed. The prod. can be used for e.g.
 CC treating bacterial infectious diseases.
 SQ Sequence 76 AA;

Query Match 100.0%; Score 97; DB 5; Length 76;
 Best Local Similarity 100.0%; Pred. No. 7.70e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Db 50 eicadpkqkwvq 61
 QY 1 EICADPKQKWVQ 12

RESULT 11
 ID R87677 standard; protein; 76 AA.
 AC R87677;
 DT 21-FEB-1996 (first entry)
 DE (3-Ala) MCP-1.
 KW monocyte chemoattractant protein; MCP-1; mutant; restenosis;
 KW angioplasty.
 OS Homo sapiens.
 FH Key
 FT Location/Qualifiers
 FT modified_site 3
 FT /note= "Asp in the native sequence is replaced by Ala"
 FT disulfide bond 11..36
 FT disulfide bond 12..52
 FT W09513295-A1.
 PD 18-MAY-1995.
 PF 07-NOV-1994; U12874.
 PR 12-NOV-1993; US-152301.
 PA (DAND) DANA FARRER CANCER INST INC.
 PI Rollins B, Zhang YJ;
 DR WPI; 95-215051/28.
 PT Human monocyte chemo-attractant protein-1 (MCP-1) derivs. - are
 PT capable of inhibiting the monocyte chemo-attractant activity of
 PT endogenous MCP-1 and can be used to treat restenosis
 PS Claim 6; Page 11; 22pp; English.
 CC Monocyte chemoattractant protein-1 (MCP-1) derivatives are mutated such
 CC that they inhibit the monocyte chemoattractant activity of endogenous
 CC MCP-1, provided that the derivative has not been modified by the
 CC substitution of 28-Tyr by Leu and/or 30-Arg by Val. Preferred mutations
 CC are: (1) substitution of 28 Tyr by aspartate; (2) substitution of 24 Arg
 CC by Phe; (3) substitution of 3-Asp by Ala; and/or (4) deletion of amino
 CC acids 2-8. The present sequence is a specifically claimed human MCP-1
 CC derivative based on the parent protein disclosed in Rollins, Molecular
 CC and Cellular Biology, Vol. 9, No. 11, pp. 4687-4695, Nov. 1989.
 CC The peptides can be used to prevent restenosis, e.g. in patients
 CC undergoing coronary artery angioplasty.
 SQ Sequence 76 AA;

Query Match 100.0%; Score 97; DB 14; Length 76;
 Best Local Similarity 100.0%; Pred. No. 7.70e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Db 50 eicadpkqkwvq 61
 QY 1 EICADPKQKWVQ 12

Sat Feb 5 15:13:43 2000

PS Disclosure; Page 5; 42pp; English.
 CC The sequences given in R53398-99 represent sense and antisense
 CC monocyte chemoattractant protein-1 (MCP-1) respectively. These
 CC oligonucleotides may be labelled with a radionuclide and use
 CC therapeutically for the treatment of vascular restenosis.
 CC Radiolabelled antisense MCP-1 compounds may be constructed using high
 CC energy alpha or beta emitting isotopes rather than the gamma
 CC emitters customarily used for diagnostic purposes. Antisense MCP-1
 CC compounds inactivate MCP-1 or inhibit production of MCP-1 so that
 CC monocytes are not attracted to the area of vascular injury and
 CC proliferation of vascular cells is inhibited.
 SQ Sequence 76 AA;

Query Match 100.0%; Score 97; DB 10; Length 76;
 Best Local Similarity 100.0%; Pred. No. 7.70e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 50 eicadpkqkwvq 61
 |||||
 QY 1 EICADPKQKWVQ 12

RESULT 12
 ID W40175 standard; Protein; 76 AA.
 AC W40175;
 DT 01-JUL-1998 (first entry)
 DE Macrophage chemoattractant peptide designated GDCF-2.
 DE Monocyte chemoattractant peptide; MCP; MCP-1; treatment; neoplasm;
 KW infection; human; monocyte receptor; chemotactic response; inflammation;
 KW monocyte infiltration.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT Modified_site 1 /note= "pyroglutamic acid"
 FT US5714578-A.
 PN 03-FEB-1998.
 PD 06-JUN-1995; 466280.
 PR 30-MAR-1989; US-330446.
 PR 31-JAN-1989; US-304234.
 PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
 PI Appella E, Leonard EJ, Robinson EA, Yoshimura T;
 WPI: 98-129909/12.
 DR Peptide with chemotactic activity for monocytes - from human
 PT monocytes or glioma cells, useful for treating infections and
 PT neoplasms
 PS Claim 1; Column 27; 21pp; English.
 CC The present sequence represents a monocyte chemoattractant peptide (MCP)
 CC designated GDCF-2. MCPs can be isolated from human glioma cell line
 CC U-105MG (e.g. present sequence) and peripheral blood mononuclear
 CC leukocytes. MCPs are used for the treatment of neoplasms and infections
 CC in humans. Short peptides derived from MCPs can be screened to identify
 CC those that can bind to the monocyte receptor without stimulating a
 CC chemotactic response. These are potentially useful for treating
 CC inflammation associated with monocyte infiltration.
 SQ Sequence 76 AA;

Query Match 100.0%; Score 97; DB 30; Length 76;
 Best Local Similarity 100.0%; Pred. No. 7.70e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 50 eicadpkqkwvq 61
 |||||
 QY 1 EICADPKQKWVQ 12

RESULT 13
 ID R53398 standard; Protein; 76 AA.
 AC R53398;
 DT 15-DEC-1994 (first entry)
 DE Sense MCP-1.
 DE Antisense; RNA; DNA; monocyte chemoattractant protein-1; MCP-1;
 KW radionuclide; vascular restenosis; alpha; beta; emitting isotope;
 KW diagnosis; monocytes; vascular injury.
 OS Mammalian.
 FH Key Location/Qualifiers
 FT misc_difference 1 /note= "Unspecified amino acid"
 FT W09409128-A.
 PN 28-APR-1994.
 PD 20-OCT-1993; U10074.
 PR 22-OCT-1992; US-965678.
 PA (MLCW) MALLINCKRODT MEDICAL INC.
 PI Lyle LR;
 DR WPI: 94-151314/18.
 PT Anti-sense monocyte chemoattractant protein-1 oligo:nucleotide(s) and
 PT peptide(s) - is used for inhibiting, treating or imaging areas of
 PT vascular restenosis or potential restenosis

PS Disclosure; Page 5; 42pp; English.
 CC The sequences given in R53398-99 represent sense and antisense
 CC monocyte chemoattractant protein-1 (MCP-1) respectively. These
 CC oligonucleotides may be labelled with a radionuclide and use
 CC therapeutically for the treatment of vascular restenosis.
 CC Radiolabelled antisense MCP-1 compounds may be constructed using high
 CC energy alpha or beta emitting isotopes rather than the gamma
 CC emitters customarily used for diagnostic purposes. Antisense MCP-1
 CC compounds inactivate MCP-1 or inhibit production of MCP-1 so that
 CC monocytes are not attracted to the area of vascular injury and
 CC proliferation of vascular cells is inhibited.
 SQ Sequence 76 AA;

Query Match 100.0%; Score 97; DB 10; Length 76;
 Best Local Similarity 100.0%; Pred. No. 7.70e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 50 eicadpkqkwvq 61
 |||||
 QY 1 EICADPKQKWVQ 12

RESULT 14
 ID R87680 standard; Protein; 76 AA.
 AC R87680;
 DT 05-MAR-1996 (first entry)
 DE Monocyte chemoattractant activating factor for use as wound remedy.
 DE Monocyte chemoattractant activating factor; MCAF; wound remedy.
 KW Homo sapiens.
 OS Homo sapiens.
 PN W09507710-A1.
 PD 23-MAR-1995.
 PF 13-SEP-1994; J01512.
 PR 13-SEP-1993; JP-227385.
 PA (TORA) TORAY IND INC.
 PI Matsushima K, Naruto M;
 WPI: 95-131181/17.
 DR Wound treatment using monocyte chemoattractant factor - has potent
 PT therapeutic effect on skin wounds and ulcers
 PS Disclosure; Page 12; 22pp; Japanese.
 CC The invention relates to a new remedy for curing wounds which, instead
 CC of comprising a growth factor, comprises a monocyte chemoattractant
 CC activating factor (MCAF) or its variants or derivatives. The factor has
 CC potent effect on skin wounds and ulcers. The present sequence is human
 CC MCAF. The activity of which is exemplified as the new remedy.
 SQ Sequence 76 AA;

Query Match 100.0%; Score 97; DB 14; Length 76;
 Best Local Similarity 100.0%; Pred. No. 7.70e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 50 eicadpkqkwvq 61
 |||||
 QY 1 EICADPKQKWVQ 12

RESULT 15
 ID R87676 standard; Protein; 76 AA.
 AC R87676;
 DT 21-FEB-1996 (first entry)
 DE (24-Arg) MCP-1.
 DE monocyte chemoattractant protein; MCP-1; mutant; restenosis;
 KW angioplasty.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT modified_site 24 /note= "Arg in the native sequence is replaced by Phe"
 FT disulfide_bond 11..36
 FT disulfide_bond 12..52
 PN W09513295-A1.
 PD 18-MAY-1995.
 PF 07-NOV-1994; U12874.
 PR 12-NOV-1993; US-152301.
 PA (DAND) DANA FARBER CANCER INST INC.

PI Rollins B, Zhang YJ;
 DR WPI; 95-215051/28.
 PT Human monocyte chemo-attractant protein-1 (MCP-1) derivs. - are
 PT capable of inhibiting the monocyte chemo-attractant activity of
 PT endogenous MCP-1 and can be used to treat restenosis
 PS Claim 5; Page 11; 22pp; English.
 CC Monocyte chemoattractant protein-1 (MCP-1) derivatives are mutated such
 CC that they inhibit the monocyte chemoattractant activity of endogenous
 CC MCP-1, provided that the derivative has not been modified by the
 CC substitution of 28-Tyr by Leu and/or 30-Arg by Val. Preferred mutations
 CC are: (1) substitution of 28 Tyr by aspartate; (2) substitution of 24 Arg
 CC by phe; (3) substitution of 3-Asp by Ala; and/or (4) deletion of amino
 CC acids 2-8. The present sequence is a specifically claimed human MCP-1
 CC derivative based on the parent protein disclosed in Rollins, Molecular
 CC and Cellular Biology, Vol. 9, No. 11, pp. 4687-4695, Nov. 1989.
 CC The peptides can be used to prevent restenosis, e.g. in patients
 CC undergoing coronary artery angioplasty.
 SQ Sequence 76 AA;

Query Match 100.0%; Score 97; DB 14; Length 76;
 Best Local Similarity 100.0%; Pred. No. 7,70e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Db 50 eicadpckckwq 61
 Qy 1 EICADPKCKRWQ 12

Search completed: Fri Feb 4 16:54:02 2000
 Job time : 20 secs.

Sa Feb 5 15:14:40 2000

US-09-150-813-38.rsp

 M P S R C H
 (TM)

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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm
 Run on: Fri Feb 4 17:03:54 2000; MasPar time 2.71 Seconds
 125.370 Million cell updates/sec
 Tabular output not generated.

Title: >US-09-150-813-38
 Description: (1-12) from US09150813.pep
 Perfect Score: 102
 Sequence: 1 QVCIDPKLWQ 12

Scoring table: PAM 150
 Gap 15

Searched: 77977 seqs, 28268293 residues

Post-processing: Minimum Match 0%
 Listing first 45 summaries

Database: swiss:prot37
 1:swissprot

Statistics: Mean 26.343; Variance 33.254; scale 0.792

pred. No. is the number of results predicted by chance to have a
 score greater than or equal to the score of the result being printed,
 and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	DB	ID	Description	Pred. No.
1	102	100.0	89	1	SDF1_MOUSE	STROMAL CELL-DERIVED F	4.02e-11
2	102	100.0	93	1	SDF1_FELCA	STROMAL CELL-DERIVED F	4.02e-11
3	102	100.0	93	1	SDF1_HUMAN	STROMAL CELL-DERIVED F	4.02e-11
4	78	76.5	101	1	IL8_SHEEP	INTERLEUKIN-8 PRECURSOR	3.89e-05
5	78	76.5	101	1	IL8_CANFA	INTERLEUKIN-8 PRECURSOR	3.89e-05
6	78	76.5	101	1	IL8_CAVPO	INTERLEUKIN-8 PRECURSOR	3.89e-05
7	76	74.5	101	1	IL8_PIG	INTERLEUKIN-8 PRECURSOR	1.15e-04
8	75	73.5	99	1	MCP1_HUMAN	MONOCYTE CHEMOTACTIC P	1.96e-04
9	75	73.5	99	1	MCP2_BOVIN	MONOCYTE CHEMOTACTIC P	1.96e-04
10	75	73.5	101	1	IL8_BOVIN	INTERLEUKIN-8 PRECURSOR	1.96e-04
11	75	73.5	101	1	MCP1_CANFA	MONOCYTE CHEMOTACTIC P	1.96e-04
12	74	72.5	99	1	MCP1_PIG	MONOCYTE CHEMOTACTIC P	3.33e-04
13	73	71.6	97	1	EOTA_MOUSE	EOTAXIN PRECURSOR (EOS	5.65e-04
14	73	71.6	97	1	EOTA_RAT	EOTAXIN PRECURSOR (EOS	5.65e-04
15	73	71.6	98	1	MCP4_HUMAN	MONOCYTE CHEMOTACTIC P	5.65e-04
16	72	70.6	101	1	IL8_RABIT	INTERLEUKIN-8 PRECURSOR	9.55e-04
17	72	70.6	125	1	MIP4_HUMAN	MACROPHAGE INFLAMMATOR	1.61e-03
18	71	69.6	89	1	MCP1_RABIT	MONOCYTE CHEMOTACTIC P	1.61e-03
19	71	69.6	97	1	EOTA_HUMAN	EOTAXIN PRECURSOR (EOS	1.61e-03
20	71	69.6	99	1	MCPA_BOVIN	MONOCYTE CHEMOTACTIC P	1.61e-03
21	70	68.6	74	1	MCPB_BOVIN	MONOCYTE CHEMOTACTIC P	2.70e-03
22	70	68.6	92	1	M1IA_RAT	MACROPHAGE INFLAMMATOR	2.70e-03
23	70	68.6	96	1	EOTA_CAVPO	EOTAXIN PRECURSOR (EOS	2.70e-03

ALIGNMENTS

RESULT	ID	SDF1_MOUSE	STANDARD;	PRT;	89 AA.
AC	P40224;				
DT	01-FEB-1995 (REL. 31, CREATED)				
DT	01-FEB-1995 (REL. 31, LAST SEQUENCE UPDATE)				
DT	15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)				
DE	STROMAL CELL-DERIVED FACTOR 1 PRECURSOR (SDF-1) (PRE-B CELL GROWTH				
DE	DE STIMULATING FACTOR) (PBSF) (12-O-TETRADECANOYLPHORBOL 13-ACETATE				
DE	REPRESSING PROTEIN 1) (TPAR1) (THYMIC LYMPHOMA CELL STIMULATING FACTOR)				
DE	(TLSEF).				
GN	SDF1				
OS	MUS MUSCULUS (MOUSE).				
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;				
OC	RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; MUS.				
RN	[1]				
RP	SEQUENCE FROM N.A.				
RP	MEDLINE: 94181581.				
EX	NAGASAWA T., KIKUTANI H., KISHIMOTO T.;				
RA	"Molecular cloning and structure of a pre-B-cell growth-stimulating				
RT	factor.";				
RT	PROC. NATL. ACAD. SCI. U.S.A. 91:2305-2309(1994).				
RN	[2]				
RP	SEQUENCE FROM N.A.				
RP	MEDLINE: 93342488.				
RA	TASHIRO K., TADA H., HEILKER R., SHIROZU M., NAKANO T., HONJO T.;				
RT	"Signal sequence trap: a cloning strategy for secreted proteins and				
RT	type I membrane proteins.";				
RL	SCIENCE 261:600-603(1993).				
RN	[3]				
RP	SEQUENCE FROM N.A.				
RP	MEDLINE: 95073497.				
RA	JIANG W., ZHOU P., KAHN S.M., TOMITA N., JOHNSON M.D.,				
RA	WEINSTEIN I.B.;				
RT	"Molecular cloning of TPARI, a gene whose expression is repressed by				
RT	the tumor promoter 12-O-tetradecanoylphorbol 13-acetate (TPA).";				
RL	EXP. CELL RES. 215:284-293(1994).				
RN	[4]				
RP	SEQUENCE FROM N.A.				
RP	STRAIN-AKR/J;				
RC	NOMURA M., NAKATA Y., UZAWA A., NOSE M., AKASHI M., SUZUKI G.;				
RL	SUBMITTED (DEC-1994) TO EMBL/GENBANK/DBJ DATA BANKS.				
CC	-!- FUNCTION: CHEMOATTRACTANT ACTIVE ON T-LYMPHOCYTES, MONOCYTES, BUT				
CC	NOT NEUTROPHILS.				
CC	-!- FUNCTION: STIMULATES THE PROLIFERATION OF BONE MARROW-DERIVED B				
CC	PROGENITOR CELLS IN THE PRESENCE OF IL-7 AS WELL AS GROWTH OF THE				
CC	STROMAL CELL-DEPENDENT B-CELL CLONE DW34 CELLS.				
CC	-!- ALTERNATIVE PRODUCTS: TWO DIFFERENT FORMS; ALPHA (SHOWN HERE) AND				

24	70	68.6	99	1	MCP2_PIG	MONOCYTE CHEMOTACTIC P	2.70e-03
25	70	68.6	120	1	MCP1_CAVPO	MONOCYTE CHEMOTACTIC P	2.70e-03
26	68	66.7	91	1	SISD_MOUSE	T-CELL SPECIFIC RANTES	7.51e-03
27	68	66.7	92	1	SISD_RAT	T-CELL SPECIFIC RANTES	7.51e-03
28	68	66.7	99	1	MCP3_HUMAN	MONOCYTE CHEMOTACTIC P	1.25e-02
29	67	65.7	148	1	MCP1_MOUSE	MONOCYTE CHEMOTACTIC P	2.06e-02
30	66	64.7	99	1	IL8_HUMAN	INTERLEUKIN-8 PRECURSOR	2.06e-02
31	66	64.7	99	1	MCP2_HUMAN	MONOCYTE CHEMOTACTIC P	2.06e-02
32	66	64.7	104	1	MCP5_MOUSE	CYCLOCHROME P450 76A2 (2.06e-02
33	66	64.7	505	1	M1IA_HUMAN	MACROPHAGE INFLAMMATOR	9.03e-02
34	63	61.8	92	1	M1IB_MOUSE	MACROPHAGE INFLAMMATOR	9.03e-02
35	63	61.8	92	1	M1IB_HUMAN	MACROPHAGE INFLAMMATOR	9.03e-02
36	63	61.8	93	1	M1IO_HUMAN	EMBRYO FIBROBLAST PROT	9.03e-02
37	63	61.8	103	1	EMFL_CHICK	TONSILLAR LYMPHOCYTE L	9.03e-02
38	63	61.8	50	1	SISD_PIG	T-CELL SPECIFIC RANTES	1.46e-01
39	62	60.8	91	1	SISD_CAVPO	T-CELL SPECIFIC RANTES	1.46e-01
40	62	60.8	91	1	SISD_HUMAN	T-CELL SPECIFIC RANTES	1.46e-01
41	62	60.8	101	1	IL8_CERTO	INTERLEUKIN-8 PRECURSOR	1.46e-01
42	62	60.8	101	1	IL8_MACMU	INTERLEUKIN-8 PRECURSOR	3.80e-01
43	62	60.8	101	1	CCC3_HUMAN	CHEMOKINE CC-3 PRECURS	3.80e-01
44	60	58.8	109	1	CHL1_YEAST	CHL1 PROTEIN.	3.80e-01
45	60	58.8	861	1			

CC BETA; ARE PROBABLY GENERATED BY ALTERNATIVE SPLICING.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).
 CC
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 CC or send an email to license@isb-sib.ch).
 CC
 CC EMBL; D12072; G468457; -
 CC EMBL; L12029; G393180; -
 CC EMBL; L12030; G393182; -
 CC EMBL; S74318; G786394; -
 CC EMBL; D43804; G1304174; -
 CC EMBL; D43805; G1304175; -
 CC PIR; A53497; A53497.
 CC MGD; MGI:103556; SDF1.
 CC PROSITE; PS00471; SMALL_CYTOKINES_CXC; FALSE_NEG.
 CC PFAM; PF00048; I18; 1.
 CC HSP; P48061; 2SDF.
 CC CYTOKINE; CHEMOTAXIS; GROWTH FACTOR; SIGNAL; ALTERNATIVE SPLICING.
 CC SIGNAL 1 19 POTENTIAL.
 CC CHAIN 20 89 STROMAL CELL-DERIVED FACTOR 1.
 CC DISULFID 30 55 BY SIMILARITY.
 CC DISULFID 32 71 BY SIMILARITY.
 CC VARSPLIC 89 89 K -> KRLKM (IN FORM BETA).
 CC SEQUENCE 89 AA; 10032 MW; 222C4E52 CRC32;
 CC
 CC Query Match 100.0%; Score 102; DB 1; Length 89;
 CC Best Local Similarity 100.0%; Pred. No. 4.02e-11;
 CC Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 CC
 CC Db 69 QVCIDPKLKWQ 80
 CC | | | | | | | | | |
 CC QY 1 QVCIDPKLKWQ 12
 CC
 CC RESULT 2
 CC ID SDF1_FELCA STANDARD; PRT; 93 AA.
 CC AC O62657;
 CC DT 15-DEC-1998 (REL. 37, CREATED)
 CC DT 15-DEC-1998 (REL. 37, LAST SEQUENCE UPDATE)
 CC DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
 CC DE STROMAL CELL-DERIVED FACTOR 1 PRECURSOR (SDF-1).
 CC GN SDF1.
 CC OS FELIS SILVESTRIS CATUS (CAT).
 CC OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC OC CARNIVORA; FISSIPEDIA; FELIDAE; FELIS.
 CC RN [1]
 CC RP SEQUENCE FROM N.A.
 CC RC TISSUE=THYMUS;
 CC RX MEDLINE; 98450506.
 CC RA NISHIMURA Y., MIYAZAWA T., IKEDA Y., IZUMIYA Y., NAKAMURA K.,
 CC CAI J.S., SATO E., KOHOTO M., MIKAMI T.;
 CC RT "Molecular cloning and sequencing of feline stromal cell-derived
 CC factor-1 alpha and beta";
 CC RL EUR. J. IMMUNOGENET. 25:303-305(1998).
 CC -!- FUNCTION: CHEMOATTRACTANT ACTIVE ON T-LYMPHOCYTES, MONOCYTES, BUT
 CC NOT NEUTROPHILS.
 CC -!- ALTERNATIVE PRODUCTS: TWO DIFFERENT FORMS; ALPHA AND BETA (SHOWN
 CC HERE); ARE GENERATED BY ALTERNATIVE SPLICING.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).
 CC
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 CC or send an email to license@isb-sib.ch).
 CC
 CC EMBL; AB011966; D1029542; -
 CC PROSITE; PS00471; SMALL_CYTOKINES_CXC; FALSE_NEG.
 CC CYTOKINE; CHEMOTAXIS; GROWTH FACTOR; SIGNAL; ALTERNATIVE SPLICING.
 CC SIGNAL 1 19 POTENTIAL.
 CC CHAIN 20 93 STROMAL CELL-DERIVED FACTOR 1.
 CC DISULFID 30 55 BY SIMILARITY.
 CC DISULFID 32 71 BY SIMILARITY.
 CC VARSPLIC 90 93 MISSING (IN FORM ALPHA).
 CC SEQUENCE 93 AA; 10581 MW; 45B71366 CRC32;
 CC
 CC Query Match 100.0%; Score 102; DB 1; Length 93;
 CC Best Local Similarity 100.0%; Pred. No. 4.02e-11;
 CC Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 CC
 CC Db 69 QVCIDPKLKWQ 80
 CC | | | | | | | | | |
 CC QY 1 QVCIDPKLKWQ 12
 CC
 CC RESULT 3
 CC ID SDF1_HUMAN STANDARD; PRT; 93 AA.
 CC AC P48061;
 CC DT 01-FEB-1996 (REL. 33, CREATED)
 CC DT 01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)
 CC DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
 CC DE STROMAL CELL-DERIVED FACTOR 1 PRECURSOR (SDF-1) (PRE-B CELL GROWTH
 CC DE STIMULATING FACTOR) (PBSF).
 CC GN SDF1.
 CC OS HOMO SAPIENS (HUMAN).
 CC OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
 CC RN [1]
 CC RP SEQUENCE FROM N.A.
 CC RA SPOTILA L.D.;
 CC RL SUBMITTED (OCT-1994) TO EMBL/GENEBANK/DBJ DATA BANKS.
 CC RN [2]
 CC RP SEQUENCE FROM N.A.
 CC RX MEDLINE; 96039262.
 CC RA SHIROZU M., NAKANO T., INAZAWA J., TASHIRO K., TADA H.,
 CC SHINOHARA T., HONJO T.;
 CC RT "Structure and chromosomal localization of the human stromal cell-
 CC derived factor 1 (SDF1) gene";
 CC RL GENOMICS 28:495-500(1995).
 CC RN [3]
 CC RP STRUCTURE BY NMR OF 22-88.
 CC RX MEDLINE; 98046030.
 CC RA CRUMP M.P., GONG J.H., LOETSCHER P., RAJARATHNAM K., AMARA A.,
 CC ARENZANA-SEIDEDOS F., VIRELIZIER J.L., BAGGIOLINI M., SYKES B.D.,
 CC CLARK-LEWIS I.;
 CC RT "Solution structure and basis for functional activity of stromal
 CC cell-derived factor-1; dissociation of CXCR4 activation from binding
 CC and inhibition of HIV-1";
 CC RL EMBO J. 16:6996-7007(1997).
 CC RN [4]
 CC RP X-RAY CRYSTALLOGRAPHY (2.2 ANGSTROMS) OF 22-88.
 CC RX MEDLINE; 98284037.
 CC RA DEALWIS C., FERNANDEZ E.J., THOMPSON D.A., SIMON R.J., STANI M.A.,
 CC LOLLIS E.;
 CC RT "Crystal structure of chemically synthesized [N33A] stromal
 CC cell-derived factor 1alpha, a potent ligand for the HIV-1 'fusin'
 CC coreceptor";
 CC RL PROC. NATL. ACAD. SCI. U.S.A. 95:6941-6946(1998).
 CC -!- FUNCTION: CHEMOATTRACTANT ACTIVE ON T-LYMPHOCYTES, MONOCYTES, BUT
 CC NOT NEUTROPHILS.
 CC -!- ALTERNATIVE PRODUCTS: TWO DIFFERENT FORMS; ALPHA AND BETA (SHOWN
 CC HERE); ARE GENERATED BY ALTERNATIVE SPLICING.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).
 CC
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DR EMBL; U16752; G571508; -;
DR EMBL; L36033; G1220366; -;
DR PDB; 1SDF; 28-JAN-98.
DR PDB; 2SDF; 17-JUN-98.
DR PDB; 1A15; 12-AUG-98.
DR MIN; 600835; -;
DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; FALSE_NEG.
DR PFAM; PF00048; IL8; 1.
KW CYTOKINE; CHEMOTAXIS; GROWTH FACTOR; SIGNAL; ALTERNATIVE SPLICING;
KW 3D-STRUCTURE. 1 19 POTENTIAL.
FT SIGNAL 20 93 STROMAL CELL-DERIVED FACTOR 1.
FT CHAIN 20 93
FT DISULFID 30 55
FT DISULFID 32 71
FT VARSPLIC 90 93 MISSING (IN FORM ALPHA).
SQ SEQUENCE 93 AA; 10666 MW; 4B9911C7 CRC32;

Query Match 100.0%; Score 102; DB 1; Length 93;
Best Local Similarity 100.0%; Pred. No. 4.02e-11; Indels 0; Gaps 0;
Matches 12; Conservative 0; Mismatches 0;

Db 69 QVCIDPKLKWQ 80
QY 1 QVCIDPKLKWQ 12
|||||||
RESULT 4
ID IL8 SHEEP STANDARD; PRT; 101 AA.
AC P36925;
DT 01-JUN-1994 (REL. 29, CREATED)
DT 01-JUN-1994 (REL. 29, LAST SEQUENCE UPDATE)
DT 01-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)
DE INTERLEUKIN-8 PRECURSOR (IL-8).
GN IL8.
OS OVIS ARIES (SHEEP).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC ARTIODACTYLA; RUMINANTIA; PECORA; BOVIDAE; CAPRINAE; OVIS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 95121931.
RA LEGASTELOIS I., GREENLAND T., ARNAUD P., MORNEX J.F., CORDIER G.;
RT "Sequencing of the ovine interleukin-8-encoding cDNA using the
RT polymerase chain reaction."
RL GENE 150:367-369(1994).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE; 95137691.
RA SEOW H.F., YOSHIMURA T., WOOD P.R., COLDITZ I.G.;
RT "Cloning, sequencing, expression and inflammatory activity in skin of
RT ovine interleukin-8."
RL IMMUNOL. CELL BIOL. 72:398-405(1994).
CC -!- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,
CC BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
CC NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
CC RESPONSE TO AN INFLAMMATORY STIMULUS.
CC -!- SUBUNIT: HOMODIMER.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CXC).

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DR EMBL; X78306; G463254; -;
DR EMBL; S74436; G786591; -;
DR PIR; S42496; S42496
DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
DR PFAM; PF00048; IL8; 1.
DR HSP; P10145; ILK.
KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
FT SIGNAL 1 22 BY SIMILARITY.
FT CHAIN 23 101 INTERLEUKIN-8.
FT DISULFID 34 61 BY SIMILARITY.
FT DISULFID 36 77 BY SIMILARITY.
SQ SEQUENCE 101 AA; 11292 MW; 5A574527 CRC32;

Query Match 76.5%; Score 78; DB 1; Length 101;
Best Local Similarity 66.7%; Pred. No. 3.89e-05;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 75 EVCIDPEKWKVQ 86
QY 1 QVCIDPKLKWQ 12
|||||||
RESULT 5
ID IL8 CANFA STANDARD; PRT; 101 AA.
AC P41324;
DT 01-FEB-1995 (REL. 31, CREATED)
DT 01-FEB-1995 (REL. 31, LAST SEQUENCE UPDATE)
DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
DE INTERLEUKIN-8 PRECURSOR (IL-8).
GN IL8.
OS CANIS FAMILIARIS (DOG).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC CARNIVORA; FISSIPEDIA; CANIDAE; CANIS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 94010328.
RA ISHIKAWA J., SUZUKI S., HOTTA K., HIROTA Y., MIZUNO S., SUZUKI K.;
RT "Cloning of a canine gene homologous to the human
RT interleukin-8-encoding gene."
RL GENE 131:305-306(1993).
RN [2]
RP SEQUENCE FROM N.A.
RX TISSUE-LYMPH NODE;
RX MEDLINE; 95127913.
RA MATSUMOTO Y., MOHAMED A., ONODERA T., KATO H., OHASHI T.,
RA GOITSUKA R., TSUJIMOTO H., HASEGAWA A., FURUSAWA S., YOSHIMURA K.,
RA ISHIKAWA J., HOTTA K., SUZUKI K., HIROTA Y.;
RT "Molecular cloning and expression of canine interleukin 8 cDNA."
RL CYTOKINE 6:455-461(1994).
RN [3]
RP SEQUENCE FROM N.A.
RX STRAIN-MONGREL; TISSUE-JUGULAR VEIN;
RX MEDLINE; 95114148.
RA KUKIELKA G.L., SMITH W.C., LAROSA G.J., MANNING A.M.,
RA MENDOZA L.H., DALY T.J., HUGHES B.J., YOUNKER K.A., HAWKINS H.K.,
RA MICHAEL L.H., ROT A., ENTMAN W.L.;
RT "Interleukin-8 gene induction in the myocardium after ischemia and
RT reperfusion in vivo."
RL J. CLIN. INVEST. 95:89-103(1994).
RN [4]
RP SEQUENCE FROM N.A.
RX STRAIN-BEAGLE;
RX MEDLINE; 97230298.
RA STRAUBINGER R.K., STRAUBINGER A.F., HARTER L., JACOBSON R.H.,
RA CHANG Y.-F., SUMMERS B.A., ERB H.N., APPEL M.J.;
RT "Borrelia burgdorferi migrates into joint capsules and causes an up-
RT regulation of interleukin-8 in synovial membranes of dogs
RT experimentally infected with ticks."
RL INFECT. IMMUN. 65:1273-1285(1997).
CC -!- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,
CC BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
CC NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
CC RESPONSE TO AN INFLAMMATORY STIMULUS.

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DR EMBL; X78306; G463254; -;
DR EMBL; S74436; G786591; -;
DR PIR; S42496; S42496
DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
DR PFAM; PF00048; IL8; 1.
DR HSP; P10145; ILK.
KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
FT SIGNAL 1 22 BY SIMILARITY.
FT CHAIN 23 101 INTERLEUKIN-8.
FT DISULFID 34 61 BY SIMILARITY.
FT DISULFID 36 77 BY SIMILARITY.
SQ SEQUENCE 101 AA; 11292 MW; 5A574527 CRC32;

Query Match 76.5%; Score 78; DB 1; Length 101;
Best Local Similarity 66.7%; Pred. No. 3.89e-05;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 75 EVCIDPEKWKVQ 86
QY 1 QVCIDPKLKWQ 12
|||||||
RESULT 5
ID IL8 CANFA STANDARD; PRT; 101 AA.
AC P41324;
DT 01-FEB-1995 (REL. 31, CREATED)
DT 01-FEB-1995 (REL. 31, LAST SEQUENCE UPDATE)
DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
DE INTERLEUKIN-8 PRECURSOR (IL-8).
GN IL8.
OS CANIS FAMILIARIS (DOG).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC CARNIVORA; FISSIPEDIA; CANIDAE; CANIS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 94010328.
RA ISHIKAWA J., SUZUKI S., HOTTA K., HIROTA Y., MIZUNO S., SUZUKI K.;
RT "Cloning of a canine gene homologous to the human
RT interleukin-8-encoding gene."
RL GENE 131:305-306(1993).
RN [2]
RP SEQUENCE FROM N.A.
RX TISSUE-LYMPH NODE;
RX MEDLINE; 95127913.
RA MATSUMOTO Y., MOHAMED A., ONODERA T., KATO H., OHASHI T.,
RA GOITSUKA R., TSUJIMOTO H., HASEGAWA A., FURUSAWA S., YOSHIMURA K.,
RA ISHIKAWA J., HOTTA K., SUZUKI K., HIROTA Y.;
RT "Molecular cloning and expression of canine interleukin 8 cDNA."
RL CYTOKINE 6:455-461(1994).
RN [3]
RP SEQUENCE FROM N.A.
RX STRAIN-MONGREL; TISSUE-JUGULAR VEIN;
RX MEDLINE; 95114148.
RA KUKIELKA G.L., SMITH W.C., LAROSA G.J., MANNING A.M.,
RA MENDOZA L.H., DALY T.J., HUGHES B.J., YOUNKER K.A., HAWKINS H.K.,
RA MICHAEL L.H., ROT A., ENTMAN W.L.;
RT "Interleukin-8 gene induction in the myocardium after ischemia and
RT reperfusion in vivo."
RL J. CLIN. INVEST. 95:89-103(1994).
RN [4]
RP SEQUENCE FROM N.A.
RX STRAIN-BEAGLE;
RX MEDLINE; 97230298.
RA STRAUBINGER R.K., STRAUBINGER A.F., HARTER L., JACOBSON R.H.,
RA CHANG Y.-F., SUMMERS B.A., ERB H.N., APPEL M.J.;
RT "Borrelia burgdorferi migrates into joint capsules and causes an up-
RT regulation of interleukin-8 in synovial membranes of dogs
RT experimentally infected with ticks."
RL INFECT. IMMUN. 65:1273-1285(1997).
CC -!- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,
CC BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
CC NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
CC RESPONSE TO AN INFLAMMATORY STIMULUS.

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DR EMBL; X78306; G463254; -;
DR EMBL; S74436; G786591; -;
DR PIR; S42496; S42496
DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
DR PFAM; PF00048; IL8; 1.
DR HSP; P10145; ILK.
KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
FT SIGNAL 1 22 BY SIMILARITY.
FT CHAIN 23 101 INTERLEUKIN-8.
FT DISULFID 34 61 BY SIMILARITY.
FT DISULFID 36 77 BY SIMILARITY.
SQ SEQUENCE 101 AA; 11292 MW; 5A574527 CRC32;

Query Match 76.5%; Score 78; DB 1; Length 101;
Best Local Similarity 66.7%; Pred. No. 3.89e-05;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 75 EVCIDPEKWKVQ 86
QY 1 QVCIDPKLKWQ 12
|||||||
RESULT 5
ID IL8 CANFA STANDARD; PRT; 101 AA.
AC P41324;
DT 01-FEB-1995 (REL. 31, CREATED)
DT 01-FEB-1995 (REL. 31, LAST SEQUENCE UPDATE)
DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
DE INTERLEUKIN-8 PRECURSOR (IL-8).
GN IL8.
OS CANIS FAMILIARIS (DOG).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC CARNIVORA; FISSIPEDIA; CANIDAE; CANIS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 94010328.
RA ISHIKAWA J., SUZUKI S., HOTTA K., HIROTA Y., MIZUNO S., SUZUKI K.;
RT "Cloning of a canine gene homologous to the human
RT interleukin-8-encoding gene."
RL GENE 131:305-306(1993).
RN [2]
RP SEQUENCE FROM N.A.
RX TISSUE-LYMPH NODE;
RX MEDLINE; 95127913.
RA MATSUMOTO Y., MOHAMED A., ONODERA T., KATO H., OHASHI T.,
RA GOITSUKA R., TSUJIMOTO H., HASEGAWA A., FURUSAWA S., YOSHIMURA K.,
RA ISHIKAWA J., HOTTA K., SUZUKI K., HIROTA Y.;
RT "Molecular cloning and expression of canine interleukin 8 cDNA."
RL CYTOKINE 6:455-461(1994).
RN [3]
RP SEQUENCE FROM N.A.
RX STRAIN-MONGREL; TISSUE-JUGULAR VEIN;
RX MEDLINE; 95114148.
RA KUKIELKA G.L., SMITH W.C., LAROSA G.J., MANNING A.M.,
RA MENDOZA L.H., DALY T.J., HUGHES B.J., YOUNKER K.A., HAWKINS H.K.,
RA MICHAEL L.H., ROT A., ENTMAN W.L.;
RT "Interleukin-8 gene induction in the myocardium after ischemia and
RT reperfusion in vivo."
RL J. CLIN. INVEST. 95:89-103(1994).
RN [4]
RP SEQUENCE FROM N.A.
RX STRAIN-BEAGLE;
RX MEDLINE; 97230298.
RA STRAUBINGER R.K., STRAUBINGER A.F., HARTER L., JACOBSON R.H.,
RA CHANG Y.-F., SUMMERS B.A., ERB H.N., APPEL M.J.;
RT "Borrelia burgdorferi migrates into joint capsules and causes an up-
RT regulation of interleukin-8 in synovial membranes of dogs
RT experimentally infected with ticks."
RL INFECT. IMMUN. 65:1273-1285(1997).
CC -!- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,
CC BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
CC NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
CC RESPONSE TO AN INFLAMMATORY STIMULUS.

[5]
SEQUENCE OF 26-45.
STRAIN=YORKSHIRE;
MEDLINE; 91217086.
GOODMAN R.B., FORSTROM J.W., OSBORN S.G., CHI E.Y., MARTIN T.R.;
Identification of two neutrophil chemotactic peptides produced by
porcine alveolar macrophages";
J. BIOL. CHEM. 266:8455-8463(1991).
-!- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,
BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
RESPONSE TO AN INFLAMMATORY STIMULUS.
-!- SUBUNIT: HOMODIMER.
-!- TISSUE SPECIFICITY: ALVEOLAR MACROPHAGES.
-!- INDUCTION: BY LIPOPOLYSACCHARIDE.
-!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
C-X-C) (CHEMOKINE CXCL).

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EMBL; M86923; G164521; -;
EMBL; X61151; G516197; -;
EMBL; M93367; G1235612; -;
PIR; A44253; A44253.
PIR; A39819; A39819.
PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
PFAM; PF00048; i18; 1.
HSP; P10145; i1KL.
CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
FT SIGNAL 1 25
FT CHAIN 26 103 INTERLEUKIN-8.
FT DISULFID 34 61 BY SIMILARITY.
FT DISULFID 36 77 BY SIMILARITY.
FT CONFLICT 33 34 RC -> CR (IN REF. 5).
FT CONFLICT 87 87 K -> KK (IN REF. 2).
FT SEQUENCE 103 AA; 11633 MW; A012D59D CRC32;

Query Match 76.5%; Score 78; DB 1; Length 103;
Best Local Similarity 66.7%; Pred. NO. 3.89e-05;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 75 EVCLDPKEKWQ 86
:::|||||:
QY 1 QVCDPLKWIQ 12

RESULT 7
ID IL8_CAVPO STANDARD; PRT; 101 AA.
AC P49113;
DT 01-FEB-1996 (REL. 33; CREATED)
DT 01-FEB-1996 (REL. 33; LAST SEQUENCE UPDATE)
DT 01-OCT-1996 (REL. 34; LAST ANNOTATION UPDATE)
DE INTERLEUKIN-8 PRECURSOR (IL-8) (NEUTROPHIL ATTRACTANT PROTEIN 1)
DE (NAP-1).
GN IL8.
OS CAVIA PORCELLUS (GUINEA PIG).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; HYSTRICOGNATHI; CAVIIDAE; CAVIA.
RN [1]
RS SEQUENCE FROM N.A.
RC TISSUE=SPLEEN;
RX MEDLINE; 94065176.
RT YOSHIMURA T., JOHNSON D.G.;
"cDNA cloning and expression of guinea pig neutrophil attractant
protein-1 (NAP-1). NAP-1 is highly conserved in guinea pig.";
J. IMMUNOL. 151:6225-6236(1993).
-!- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,

BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
 NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
 RESPONSE TO AN INFLAMMATORY STIMULUS (BY SIMILARITY).
 -1- SUBUNIT: HOMODIMER (BY SIMILARITY).
 -1- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 C-X-C) (CHEMOKINE CXCL).

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 EMBL: L04986; G459765; "
 PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 PFAM; PF00048; I18; 1.
 HSP; P10145; LIKL.
 CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 SIGNAL 1 22 BY SIMILARITY.
 CHAIN 23 101 INTERLEUKIN-8.
 DISULFID 34 61 BY SIMILARITY.
 DISULFID 36 77 BY SIMILARITY.
 SEQUENCE 101 AA; 11414 MW; E13FB521 CRC32;

 Query Match 74.5%; Score 76; DB 1; Length 101;
 Best Local Similarity 66.7%; Pred. No. 1.15e-04;
 Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

 Db 75 QICLDPKKKWQ 86
 |:|:|:|:|:|:|
 QY 1 QVCIDPKLKWQ 12

 RESULT 8
 ID MCPL_HUMAN STANDARD: PRT; 99 AA.
 AC P13500;
 DT 01-JAN-1990 (REL. 13, CREATED)
 DT 01-JAN-1990 (REL. 13, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1) (MONOCYTE CHEMOTACTIC
 DE AND ACTIVATING FACTOR) (MCAF) (MONOCYTE SECRETORY PROTEIN JE)
 DE (MONOCYTE CHEMOATTRACTANT PROTEIN 1) (HC11) (SMALL INDUCIBLE CYTOKINE
 DE A2).
 GN SC1A2 OR MCP1.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 89165862.
 RA FURUTANI Y., NOMURA H., NOTAKE M., OYAMADA Y., FUKUI T., YAMADA M.,
 RA LARSEN C.G., OPPENHEIM J.J., MATSUSHIMA K.;
 RT "Cloning and sequencing of the cDNA for human monocyte chemotactic
 RT and activating factor (MCAF).";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 159:249-255(1989).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 90097880.
 RA ROLLINS B.J., STIER P., ERNST T., WONG G.G.;
 RT "The human homolog of the JE gene encodes a monocyte secretory
 RT protein.";
 RL MOL. CELL. BIOL. 9:4687-4695(1989).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 89153605.
 RA YOSHIMURA T., YUKHI N., MOORE S.K., APPELLA E., LERMAN M.I.,
 RA LEONARD E.J.;
 RT "Human monocyte chemoattractant protein-1 (MCP-1). Full-length cDNA
 RT cloning, expression in mitogen-stimulated blood mononuclear
 RT leukocytes, and sequence similarity to mouse competence gene JE.";
 RL FEBS LETT. 244:487-493(1989).

4

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RT RT Induction of monocyte chemoattractant protein-1 in the small veins
 RL of the ischemic and reperfused canine myocardium.*;
 CC CIRCULATION 95:693-700(1997).
 CC -1- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
 CC NEUTROPHILS. IMPORTANT FACTOR IN THE COURSE OF THE INFLAMMATORY
 CC REACTION TO REPERFUSION OF THE PREVIOUSLY ISCHEMIC MYOCARDIUM.
 CC MAY PLAY A SIGNIFICANT ROLE IN MONOCYTE TRAFFICKING INTO THE
 CC REPERFUSED MYOCARDIUM.
 CC -1- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
 CC -1- INDUCTION: BY INF-ALPHA.
 CC -1- TISSUE SPECIFICITY: ENDOTHELIUM OF SMALL VEINS AND INTRAFASCICULAR
 CC VEINS, AND INFILTRATING LEUKOCYTES
 CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
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 CC
 CC EMBL: U29653; G1144186;
 CC PROSITE; P500472; SMALL_CYTOKINES_CC; 1.
 CC PFAM; PF00048; 118; 1.
 CC HSP; P13500; 1DON.
 CC CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE.
 CC SIGNAL 1 23 BY SIMILARITY.
 CC FT CHAIN 24 101 MONOCYTE CHEMOTACTIC PROTEIN 1.
 CC MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
 CC SIMILARITY).
 CC FT DISULFID 34 59 BY SIMILARITY.
 CC FT DISULFID 35 75 BY SIMILARITY.
 CC FT SEQUENCE 101 AA; 11121 MW; A7075B14 CRC32;
 CC
 CC Query Match 73.5%; Score 75; DB 1; Length 101;
 CC Best Local Similarity 58.3%; Pred. No. 1.96e-04;
 CC Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;
 CC
 CC Db 73 EICADPKKQWQ 84
 CC QY 1 QVCIDPKLKWQ 12
 CC
 CC RESULT 12 STANDARD; PRT; 99 AA.
 CC ID MCP1_PIG
 CC AC P42831;
 CC DT 01-NOV-1995 (REL. 32, CREATED)
 CC DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
 CC DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 CC DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1).
 CC GN SCY2.
 CC OS SUS SCROFA (PIG).
 CC OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC OC ARTIODACTYLA; SUIFORMES; SUINA; SUIDAE; SUS.
 CC RN [1]
 CC RP SEQUENCE FROM N.A.
 CC RX MEDLINE; 94183284.
 CC RA HOSANG K., KNOKE I., KLAUDINI J., WEMPE F., WUTKE W., SCHEIT K.H.;
 CC RT "Porcine luteal cells express monocyte chemoattractant protein-1
 CC (MCP-1): analysis by polymerase chain reaction and cDNA cloning.";
 CC RL BIOCHEM. BIOPHYS. RES. COMMUN. 199;962-968(1994).
 CC RN [2]
 CC RP SEQUENCE FROM N.A.
 CC RC TISSUE-BRAIN;
 CC RA ZACH O.R.F.;
 CC RL SUBMITTED (JUL-1994) TO EMBL/GENBANK/DBJ DATA BANKS.
 CC CC -1- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
 CC NEUTROPHILS.
 CC CC -1- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
 CC CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).

RESULT 10
 ID IL8_BOVIN STANDARD; PRT; 101 AA.
 AC P79755;
 DT 01-NOV-1997 (REL. 35, LAST SEQUENCE UPDATE)
 DT 01-NOV-1997 (REL. 35, LAST SEQUENCE UPDATE)
 DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
 DE INTERLEUKIN-8 PRECURSOR (IL-8).
 GN IL8.
 OS BOS TAURUS (BOVINE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC ARTIODACTYLA; RUMINANTIA; PECORA; BOVIDAE; BOVINAE; BOS.
 CC
 CC [1]
 CC RP SEQUENCE FROM N.A.
 CC RX MEDLINE; 96304552.
 CC RA MORSEY M.A., POPOWICH Y., KOWALSKI J., GERLACH G., GODSON D.,
 CC CAMPOS M., BABIUK L.A.;
 CC RT "Molecular cloning and expression of bovine interleukin-8.";
 CC J. MICROB. PATHOG. 20:203-212(1996).
 CC -1- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,
 CC BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
 CC NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
 CC RESPONSE TO AN INFLAMMATORY STIMULUS (BY SIMILARITY).
 CC -1- SUBUNIT: HOMODIMER (BY SIMILARITY).
 CC -1- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CX).
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 CC
 CC EMBL: S82598; G1699354;
 CC PROSITE; P500471; SMALL_CYTOKINES_CX; 1.
 CC PFAM; PF00048; 118; 1.
 CC HSP; P10145; 1IKL.
 CC CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 CC SIGNAL 1 22 BY SIMILARITY.
 CC FT CHAIN 23 101 INTERLEUKIN-8.
 CC FT DISULFID 34 61 BY SIMILARITY.
 CC FT DISULFID 36 77 BY SIMILARITY.
 CC FT SEQUENCE 101 AA; 11291 MW; 0E39C526 CRC32;
 CC
 CC Query Match 73.5%; Score 75; DB 1; Length 101;
 CC Best Local Similarity 58.3%; Pred. No. 1.96e-04;
 CC Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;
 CC
 CC Db 75 EVCNPKKQWQ 86
 CC QY 1 QVCIDPKLKWQ 12
 CC
 CC RESULT 11 STANDARD; PRT; 101 AA.
 CC ID MCP1_CANFA
 CC AC P52203;
 CC DT 01-OCT-1996 (REL. 34, CREATED)
 CC DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
 CC DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 CC DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1) (MONOCYTE
 CC CHEMOATTRACTANT PROTEIN-1).
 CC GN SCY2 OR MCP1.
 CC OS CANIS FAMILIARIS (DOG).
 CC OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC OC CARNIVORA; FISSIPEDIA; CANIDAE; CANIS.
 CC RN [1]
 CC RP SEQUENCE FROM N.A.
 CC RC TISSUE-JUGULAR VEIN ENDOTHELIAL;
 CC RX MEDLINE; 97176620.
 CC RA KUMAR A.G., BALLANTYNE C.M., MICHAEL L.H., KUKIELKA G.L., YOUNGER K.A.,
 CC LINDSEY M.L., HAWKINS H.K., BIRDSALL H.H., MACKAY C.R., LAROSA G.J.,
 CC ROSSEN R.D., SMITH C.W., ENTMAN M.L.;

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DR EMBL; 248479; G683717; -;
 DR EMBL; G872313; -;
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSSP; P13500; 1DON.
 KW CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE.
 FT SIGNAL 1 23
 FT CHAIN 24 99 BY SIMILARITY.
 FT MOD_RES 24 24 MONOCYTE CHEMOTACTIC PROTEIN 1.
 FT 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
 FT 34 59 SIMILARITY).
 FT DISULFID 35 75 BY SIMILARITY.
 FT 35 75 BY SIMILARITY.
 SQ SEQUENCE 99 AA; 10976 MW; ECC3APB4 CRC32;

Query Match 72.5%; Score 74; DB 1; Length 99;
 Best Local Similarity 50.0%; Pred. No. 3.33e-04;
 Matches 6; Conservative 4; Mismatches 2; Indels 0; Gaps 0;

Db 73 EICAEPRKQKVVQ 84
 : : : : :
 QY 1 QVCIDPKLKWIQ 12

RESULT 13
 ID EOTA_MOUSE STANDARD; PRT; 97 AA.
 AC P48298;
 DT 01-FEB-1996 (REL. 33, CREATED)
 DT 01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST SEQUENCE UPDATE)
 DE EOTAXIN PRECURSOR (EOSINOPHIL CHEMOTACTIC PROTEIN).
 GN SCYAL1.
 OS MUS MUSCULUS (MOUSE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; MUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=LUNG;
 RX MEDLINE; 96004658.
 RA ROTHENBERG M.E., LUSTER A.D., LEDER P.;
 RT "Murine eotaxin: an eosinophil chemoattractant inducible in
 RL endothelial cells and in interleukin 4-induced tumor suppression.";
 RL PROC. NATL. ACAD. SCI. U.S.A. 92:8960-8964(1995).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC STRAIN-C57BL/6J; TISSUE=LUNG;
 RX MEDLINE; 96158746.
 RA GONZALO J.-A., JIA G.-Q., AGUIRRE V., FRIEND D., COYLE A.J.,
 RA JENKINS N.A., LIN G.-S., KATZ H., LICHTMAN A., COPELAND N.G., KOPF M.,
 RA GUTIERREZ-RAMOS J.-C.;
 RT "Mouse eotaxin expression parallels eosinophil accumulation during
 RL lung allergic inflammation but it is not restricted to a Th2-type
 RL response";
 RL IMMUNITY 4:1-14(1996).
 CC -!- FUNCTION: IN RESPONSE TO THE PRESENCE OF ALLERGENS, THIS PROTEIN
 CC DIRECTLY PROMOTES THE ACCUMULATION OF EOSINOPHILS (A PROMINENT
 CC FEATURE OF ALLERGIC INFLAMMATORY REACTIONS), BUT NOT
 CC LYMPHOCYTES, MACROPHAGES OR NEUTROPHILS.
 CC -!- SUBCELLULAR LOCATION: EXTRACELLULAR.
 CC -!- TISSUE SPECIFICITY: EXPRESSED CONSTITUTIVELY IN THE THYMUS.
 CC EXPRESSION INDUCIBLE IN THE LUNG (TYPE I ALVEOLAR EPITHELIAL
 CC CELLS), INTESTINE, HEART, SPLEEN, KIDNEY.
 CC -!- INDUCTION: BY INTERFERON-GAMMA AND LIPOPOLYSACCHARIDE (LPS).
 CC -!- PTM: O-GLYCOSYLATED (PROBABLE).
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE

CC C-C) (CHEMOKINE CC).
 CC -----

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DR EMBL; U26426; G995911; -;
 DR EMBL; U40672; G1113937; -;
 DR MGD; MGI:103576; SCYAL1.
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSSP; P80098; 1NGV.
 KW EOSINOPHIL; CYTOKINE; CHEMOTAXIS; GLYCOPROTEIN; SIGNAL;
 KW INFLAMMATORY RESPONSE.
 FT SIGNAL 1 23
 FT CHAIN 24 97
 FT DISULFID 32 57 BY SIMILARITY.
 FT DISULFID 33 73 BY SIMILARITY.
 SQ SEQUENCE 97 AA; 10893 MW; F85A96BC CRC32;

Query Match 71.6%; Score 73; DB 1; Length 97;
 Best Local Similarity 58.3%; Pred. No. 5.65e-04;
 Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 71 EICADPKKKVVQ 82
 : : : : :
 QY 1 QVCIDPKLKWIQ 12

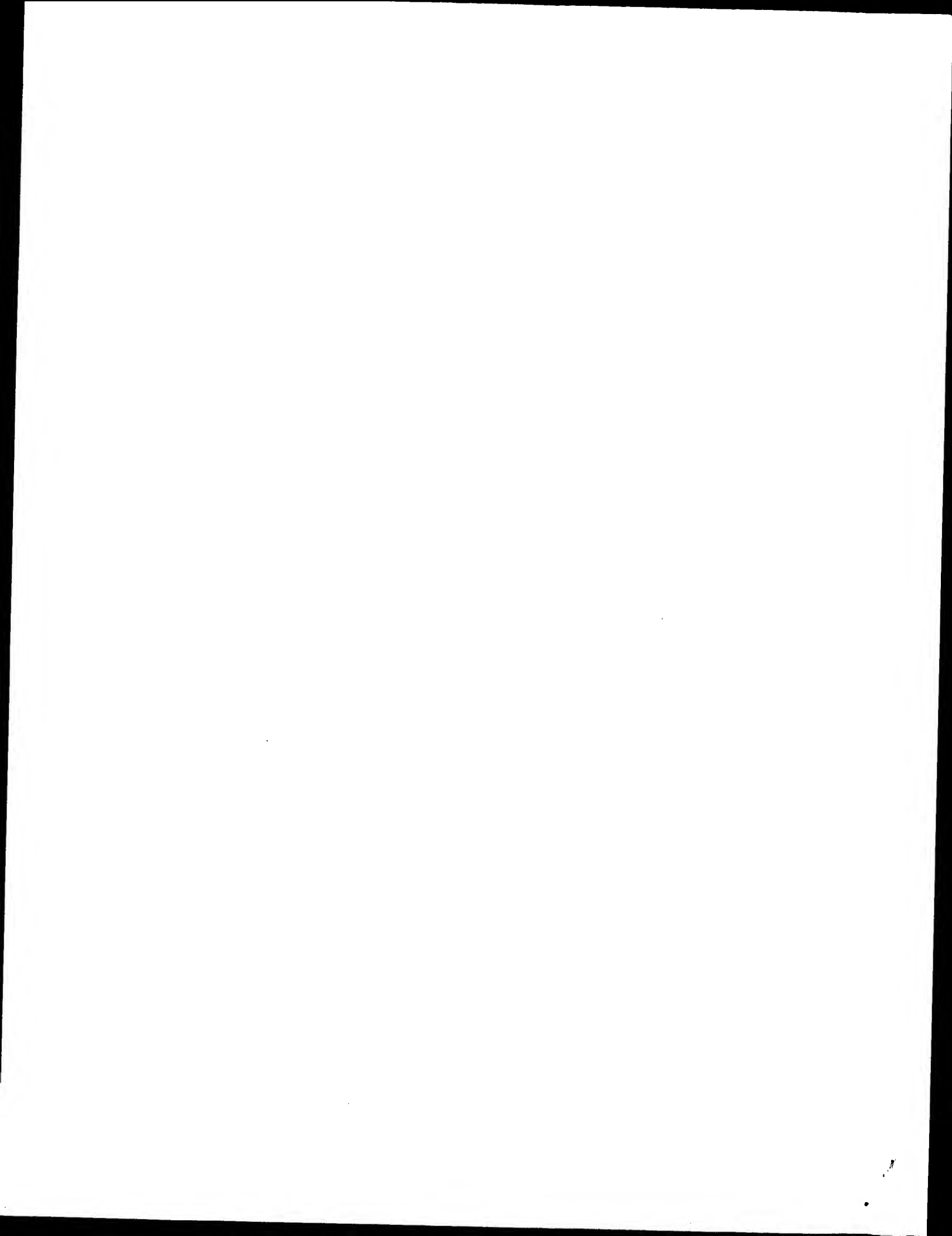
RESULT 14
 ID EOTA_RAT STANDARD; PRT; 97 AA.
 AC P97545; 008780;
 DT 15-JUL-1998 (REL. 36, CREATED)
 DT 15-JUL-1998 (REL. 36, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST SEQUENCE UPDATE)
 DE EOTAXIN PRECURSOR (EOSINOPHIL CHEMOTACTIC PROTEIN).
 OS RATUS NORVEGICUS (RAT).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RA WILLIAMS C.M., NEWTON D.J., WILSON S.A., COLEMAN J.C.,
 RA FLANAGAN B.F.;
 RL SUBMITTED (DEC-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [2]
 RP SEQUENCE FROM N.A.
 RC TISSUE=LUNG;
 RA ISHII Y.;
 RL SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 CC -!- FUNCTION: IN RESPONSE TO THE PRESENCE OF ALLERGENS, THIS PROTEIN
 CC DIRECTLY PROMOTES THE ACCUMULATION OF EOSINOPHILS, A PROMINENT
 CC FEATURE OF ALLERGIC INFLAMMATORY REACTIONS (BY SIMILARITY).
 CC -!- SUBCELLULAR LOCATION: EXTRACELLULAR.
 CC -!- PTM: O-GLYCOSYLATED (PROBABLE).
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC -----

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DR EMBL; Y08358; E274141; -;
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.

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HSP: P80098; INCV
 EOSINOPHIL; CYTOKINE; CHEMOTAXIS; GLYCOPROTEIN; SIGNAL;
 KW INFLAMMATORY RESPONSE.
 FT SIGNAL 1 23 POTENTIAL.
 FT CHAIN 24 97 EOTAXIN.
 FT DISULFID 32 57 BY SIMILARITY.
 FT DISULFID 33 73 BY SIMILARITY.
 FT CARBOHYD 94 94 POTENTIAL.
 FT CONFLICT 3 3 L->S (IN REF. 2).
 SQ SEQUENCE 97 AA: 10851 MW; 05B4ED45 CRC32;
 Query Match 71.6%; Score 73; DB 1; Length 97;
 Best Local Similarity 58.3%; Pred. No. 5.65e-04;
 Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;
 Db 71 EICADPKKKVQ 82
 QY 1 QVCIDPKLKWQ 12
 RESULT 15 STANDARD; PRT; 98 AA.
 ID MCP4_HUMAN
 AC Q99616;
 DT 15-JUL-1998 (REL. 36, CREATED)
 DT 15-JUL-1998 (REL. 36, LAST SEQUENCE UPDATE)
 DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
 DE MONOCYTE CHEMOTACTIC PROTEIN 4 PRECURSOR (MCP-4) (MONOCYTE
 CHEMOTACTIC PROTEIN 4) (CK-BETA10) (NCC-1).
 DE SCV413 OR MCP4 OR NCC1.
 GN HOMO SAPIENS (HUMAN).
 OS EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=HEART;
 RX MEDLINE; 97113354.
 RA GARCIA-ZEPEDA E.A., COMBADIERE C., ROTHENBERG M.E., SARAFI M.N.,
 RA LAVIGNE F., HAMID Q., MURPHY P.M., LUSTER A.D.;
 RT "Human monocyte chemoattractant protein (MCP)-4 is a novel CC
 RT chemokine with activities on monocytes, eosinophils, and basophils
 RT induced in allergic and nonallergic inflammation that signals through
 RT the CC chemokine receptors (CCR)-2 and -3.";
 RL J. IMMUNOL. 157:5613-5626(1996).
 RN [2]
 RP SEQUENCE FROM N.A., AND SEQUENCE OF 17-98.
 RC TISSUE=FETAL;
 RX MEDLINE; 96235049.
 RA UGUCCIONI M., LOETSCHER P., FORSSMANN U., DEWALD B., LI H., LIMA S.H.,
 RA LI Y., KREIDER B., GAROTTA G., THELEN M., BAGGIOLINI M.;
 RT "Monocyte chemotactic protein 4 (MCP-4), a novel structural and
 RT functional analogue of MCP-3 and eotaxin.";
 RL J. EXP. MED. 183:2379-2394(1996).
 RN [3]
 RP SEQUENCE FROM N.A., AND SEQUENCE OF 22-33.
 RC TISSUE=FETAL;
 RX MEDLINE; 97341179.
 RA BERKHOUT T.A., SARAU H.M., MOORES K., WHITE J.R., ELSHOURBAGY N.,
 RA APPELBAUM E., REAPE T.J., BRAUNER M., MAKWANA J., FOLEY J.J.,
 RA SCHMIDT D.B., IMBURGIA C., MACNULTY D., MATTHEWS J., O'DONNELL K.,
 RA O'SHANNESSEY D., SCOTT M., GROOT P.H.E., MACPHEE C.;
 RT "Cloning, in vitro expression, and functional characterization of a
 RT novel human CC chemokine of the monocyte chemotactic protein (MCP)
 RT family (MCP-4) that binds and signals through the CC chemokine
 RT receptor 2B.";
 RL J. BIOL. CHEM. 272:16404-16413(1997).
 RN [4]
 RP SEQUENCE FROM N.A.
 RA DANTE M., GIBSON A.;
 RL SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [5]
 RP SEQUENCE FROM N.A.
 RC TISSUE=LUNG; MEYER A., RISON S.C.G., GUYE-COULIN F., WELLS T.N.C.;
 RA POWER C.A., MEYER A., RISON S.C.G., GUYE-COULIN F., WELLS T.N.C.;
 SUBMITTED (DEC-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, LYMPHOCYTES,
 CC EOSINOPHILS AND EOSINOPHILS, BUT NOT NEUTROPHILS. SIGNALS THROUGH
 CC CCR2B AND CCR3 RECEPTORS. PLAYS A ROLE IN THE ACCUMULATION OF
 CC LEUKOCYTES AT BOTH SIDES OF ALLERGIC AND NONALLERGIC INFLAMMATION.
 CC MAY BE INVOLVED IN THE RECRUITMENT OF MONOCYTES INTO THE ARTERIAL
 CC WALL DURING THE DISEASE PROCESS OF ATHEROSCLEROSIS. MAY PLAY A
 CC ROLE IN THE MONOCYTE ATTRACTION IN TISSUES CHRONICALLY EXPOSED TO
 CC EXOGENOUS PATHOGENS.
 CC -!- MASS SPECTROMETRY: MW=9314; MW_ERR=30; METHOD=MALDI; RANGE=17-98.
 CC -!- MASS SPECTROMETRY: MW=8760; MW_ERR=30; METHOD=MALDI; RANGE=22-98.
 CC -!- MASS SPECTROMETRY: MW=8575; MW_ERR=30; METHOD=MALDI; RANGE=24-98.
 CC -!- INDUCTION: BY INTERLEUKIN-1 AND TNF-ALPHA.
 CC -!- TISSUE SPECIFICITY: WIDELY EXPRESSED. FOUND IN SMALL INTESTINE,
 CC THYMUS, COLON, LUNG, TRACHEA, STOMACH AND LYMPH NODE. LOW LEVELS
 CC SEEN IN THE PULMONARY ARTERY SMOOTH MUSCLE CELLS.
 CC -!- THIS PROTEIN CAN BIND HEPARIN.
 CC -!- PTM: ONE MAJOR ISOFORM MCP-4, AND TWO MINOR ISOFORMS (LA)MCP-4 AND
 CC (FNPGLA)MCP-4 ARE PRODUCED BY DIFFERENTIAL SIGNAL CLEAVAGE.
 CC (LA)MCP-4 IS ABOUT 30 FOLD LESS ACTIVE THAN MCP-4.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC -----
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 CC -----
 CC EMBL; U46767; G1732123; -.
 CC EMBL; AC002482; G2340091; -.
 CC EMBL; X98306; E248571; -.
 CC MIM: 601391; -.
 CC PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
 CC PFAM; PF000048; i18; 1.
 CC HSP; P80098; i18; 1.
 CC CYTOKINE; CHEMOTAXIS; SIGNAL; GLYCOPROTEIN; INFLAMMATORY RESPONSE.
 KW SIGNAL 1 23 MONOCYTE CHEMOTACTIC PROTEIN 4.
 FT CHAIN 24 98 PYRROLIDONE CARBOXYLIC ACID.
 FT MOD_RES 24 24 BY SIMILARITY.
 FT DISULFID 34 58 BY SIMILARITY.
 FT DISULFID 35 74 BY SIMILARITY.
 FT CARBOHYD 29 29 POTENTIAL.
 SQ SEQUENCE 98 AA; 10986 MW; DF52F6EC CRC32;
 Query Match 71.6%; Score 73; DB 1; Length 98;
 Best Local Similarity 58.3%; Pred. No. 5.65e-04;
 Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;
 Db 72 EICADPKKKVQ 83
 QY 1 QVCIDPKLKWQ 12
 Search completed: Fri Feb 4 17:04:05 2000
 Job time : 11 secs.



M P S R C H
(TM)

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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm
Run on: Fri Feb 4 17:03:15 2000; MasPar time 3.60 Seconds
133.382 Million cell updates/sec
Tabular output not generated.

Title: >US-09-150-813-38
Description: (1-12) from US09150813.p3p
Perfect Score: 102
Sequence: 1 QVCIDPKLKWIQ 12

Scoring table: PAM 150
Gap 15

Searched: 122810 seqs, 40068593 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: pir60
1:pir1 2:pir2 3:pir3 4:pir4

Statistics: Mean 25.707; Variance 37.444; scale 0.687

pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	ID	Description	Pred. No.
1	102	100.0	89	2	I53416 interleukin-8 homolog	2.50e-09
2	102	100.0	89	2	A53497 pre-B-cell growth-sti	2.50e-09
3	102	100.0	93	2	G01540 cytokine SDF-1-beta	2.50e-09
4	102	100.0	93	2	I81182 cytokine - mouse	2.50e-09
5	78	76.5	95	2	JN0841 interleukin-8 - dog	4.52e-04
6	78	76.5	101	2	S42496 interleukin-8 - sheep	4.52e-04
7	78	76.5	101	2	I46997 interleukin-8 - sheep	4.52e-04
8	78	76.5	103	2	A53096 interleukin-8 precurs	4.52e-04
9	78	76.5	103	2	A44253 alveolar macrophage c	4.52e-04
10	76	74.5	101	2	I48148 Neutrophil attractant	1.17e-03
11	75	73.5	99	2	A60299 monocyte chemoattract	1.88e-03
12	74	72.5	99	2	JC2136 monocyte chemoattract	3.00e-03
13	72	70.6	101	2	I46871 interleukin-8 - rabbi	7.60e-03
14	72	70.6	125	2	JC2336 monocyte chemoattract	7.60e-03
15	71	69.6	99	2	A53296 monocyte chemoattract	1.20e-02
16	71	69.6	99	2	I52322 macrophage inflammato	1.20e-02
17	70	68.6	92	2	I52322 eotaxin precursor - g	1.90e-02
18	70	68.6	96	2	I48099 eotaxin precursor - I	1.90e-02
19	70	68.6	96	2	JC2478 monocyte chemoattract	1.90e-02
20	70	68.6	99	2	JC2417 monocyte chemoattract	1.90e-02
21	70	68.6	120	2	I48147 monocyte chemoattract	4.70e-02
22	68	66.7	91	1	A46539 monocyte chemoattract	4.70e-02
23	68	66.7	97	2	JC4912 eotaxin precursor - h	4.70e-02

24	68	66.7	109	2	A54678 monocyte chemotactic	4.70e-02
25	67	65.7	148	2	A30209 PDGF-inducible JE gly	7.38e-02
26	66	64.7	99	2	JC5295 monocyte chemotactic	1.15e-01
27	66	64.7	99	2	A37034 interleukin-8 precurs	1.15e-01
28	66	64.7	505	2	S38534 cytochrome P450 76A2	1.15e-01
29	63	61.8	50	2	C60407 monocyte adherence-in	4.25e-01
30	63	61.8	92	1	A31677 macrophage inflammato	4.25e-01
31	63	61.8	92	2	A32393 macrophage inflammato	4.25e-01
32	63	61.8	92	2	A30574 macrophage inflammato	4.25e-01
33	63	61.8	93	2	B35673 LD78-beta protein pre	4.25e-01
34	63	61.8	103	2	A26736 transformation-induce	4.25e-01
35	63	61.8	103	2	I50417 RSV-induced protein -	4.25e-01
36	63	61.8	1325	2	T01037 hypothetical protein	4.25e-01
37	62	60.8	91	1	A28815 monocyte chemoattract	6.53e-01
38	60	58.8	92	2	I46730 immune activation gen	1.52e+00
39	60	58.8	478	2	S61192 hypothetical protein	1.52e+00
40	60	58.8	861	2	S12499 CHL1 protein - yeast	1.52e+00
41	59	57.8	148	2	S07723 immediate-early serum	2.31e+00
42	58	56.9	350	2	S51406 hypothetical protein	3.49e+00
43	58	56.9	899	2	C02428 prohormone convertase	3.49e+00
44	58	56.9	915	2	JC6148 subtilisin-like propr	3.49e+00
45	58	56.9	915	2	B48225 probable proprotein c	3.49e+00

ALIGNMENTS

RESULT 1
ENTRY interleukin-8 homolog - mouse
TITLE #type complete
ORGANISM #formal_name Mus sp. #common_name mouse
DATE 02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change 28-Feb-1997

153416
interleukin-8 homolog - mouse
#formal_name Mus sp. #common_name mouse
02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change 28-Feb-1997

I53416
Jiang, W.; Zhou, P.; Kahn, S.M.; Tomita, N.; Johnson, M.D.; Weinstein, I.B.
Exp. Cell Res. (1994) 215:284-293
Molecular cloning of TPARI, a gene whose expression is repressed by the tumor promoter 12-O-tetradecanoylphorbol 13-acetate (TPA).

13-acetate (TPA).
#cross-references MUID:95073497

I53416
preliminary; translated from GB/EMBL/DBJ
#accession 153416
#status
#molecule_type mRNA
#residues 1-89 #label RES
#cross-references GB:S74318; NID:G786393; PID:G786394

GENETICS
#gene TPARI
#length 89 #molecular-weight 10032 #checksum 4622

SUMMARY
Query Match 100.0%; Score 102; DB 2; Length 89;
Best Local Similarity 100.0%; Pred. No. 2.50e-09;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 69 QVCIDPKLKWIQ 80
QY 1 QVCIDPKLKWIQ 12

RESULT 2
ENTRY pre-B-cell growth-stimulating factor precursor - mouse
TITLE #formal_name Mus musculus #common_name house mouse
ORGANISM 02-Jun-1994 #sequence_revision 02-Jun-1994 #text_change 10-Sep-1997
DATE A53497; I59582
A53497
Nagasawa, T.; Kikutani, H.; Kishimoto, T.
Proc. Natl. Acad. Sci. U.S.A. (1994) 91:2305-2309
Molecular cloning and structure of a pre-B-cell growth-stimulating factor.
#cross-references MUID:94181581
#accession A53497

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##status      preliminary
##molecule_type mRNA
##residues    1-89 ##label NAG
##cross-references GB:D21072; NID:g413905; PID:d1005177; PID:g468457
REFERENCE     159582
#authors      Tashiro, K.; Tada, H.; Heilker, R.; Shirozu, M.; Nakano, T.;
#journal      Science (1993) 261:600-603
#title        Signal sequence trap: a cloning strategy for secreted
#cross-references EMBL:93342488
#accession    I59582
##status      preliminary; translated from GB/EMBL/DBJ
##molecule_type mRNA
##residues    1-89 ##label RES
##cross-references GB:L12029; NID:g393179; PID:g393180
GENETICS      SDF-1-alpha
KEYWORDS      cytokine
SUMMARY       #length 89 #molecular-weight 10032 #checksum 4622
Query Match   100.0%; Score 102; DB 2; Length 89;
Best Local Similarity 100.0%; Pred. No. 2.50e-09;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Db 69 QVCIDPKLKWQ 80
   |||||
QY 1 QVCIDPKLKWQ 12
RESULT        3
ENTRY         G01540 #type complete
TITLE         cytokine sdf-1-beta - human
ORGANISM      #formal_name Homo sapiens #common_name man
DATE          21-Dec-1996 #sequence_revision 06-Jun-1997 #text_change
17-Jul-1998
ACCESSIONS    G01540
REFERENCE     G07697
#authors      Spittala, L.D.
#submission   submitted to the EMBL Data Library, October 1994
#accession    G01540
##status      preliminary; translated from GB/EMBL/DBJ
##molecule_type mRNA
##residues    1-93 ##label SPO
##cross-references EMBL:U16752; NID:g1272194; PID:g571508
SUMMARY       #length 93 #molecular-weight 10666 #checksum 6309
Query Match   100.0%; Score 102; DB 2; Length 93;
Best Local Similarity 100.0%; Pred. No. 2.50e-09;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Db 69 QVCIDPKLKWQ 80
   |||||
QY 1 QVCIDPKLKWQ 12
RESULT        4
ENTRY         I81182 #type complete
TITLE         cytokine - mouse
ORGANISM      #formal_name Mus musculus #common_name house mouse
DATE          02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change
28-Feb-1997
ACCESSIONS    I81182
REFERENCE     I59582
#authors      Tashiro, K.; Tada, H.; Heilker, R.; Shirozu, M.; Nakano, T.;
#journal      Science (1993) 261:600-603
#title        Signal sequence trap: a cloning strategy for secreted
#cross-references EMBL:93342488
#accession    I81182
##status      preliminary; translated from GB/EMBL/DBJ
##molecule_type mRNA

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```

##residues    1-93 ##label RES
##cross-references GB:L12030; NID:g393181; PID:g393182
GENETICS      SDF-1-beta
#gene         #length 93 #molecular-weight 10561 #checksum 5309
SUMMARY       Query Match 100.0%; Score 102; DB 2; Length 93;
Best Local Similarity 100.0%; Pred. No. 2.50e-09;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Db 69 QVCIDPKLKWQ 80
   |||||
QY 1 QVCIDPKLKWQ 12
RESULT        5
ENTRY         JN0841 #type complete
TITLE         interleukin-8 - dog
ORGANISM      #formal_name Canis lupus familiaris #common_name dog
DATE          19-May-1994 #sequence_revision 19-May-1994 #text_change
12-Apr-1995
ACCESSIONS    JN0841
REFERENCE     JN0841
#authors      Ishikawa, J.; Suzuki, S.; Hotta, K.; Hirota, Y.; Mizuno, S.;
#journal      Gene (1993) 131:305-306
#title        Cloning of a canine gene homologous to the human
#cross-references MUID:94010328
#accession    JN0841
##molecule_type DNA
##residues    1-95 ##label ISH
COMMENT       This protein is a polymorphonuclear leukocytes chemotactic factor
and is involved in the host defense function.
GENETICS      #introns 22/1; 67/2
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY       #length 95 #molecular-weight 10611 #checksum 3157
Query Match   76.5%; Score 78; DB 2; Length 95;
Best Local Similarity 66.7%; Pred. No. 4.52e-04;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
Db 75 EVCLDPKRWQ 86
   |||||
QY 1 QVCIDPKLKWQ 12
RESULT        6
ENTRY         S42496 #type complete
TITLE         interleukin 8 - sheep
ORGANISM      #formal_name Ovis orientalis aries, Ovis ammon aries
#common_name domestic sheep
DATE          06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change
08-Sep-1997
ACCESSIONS    S42496
REFERENCE     S42496
#authors      Legastelois, I.; Greenland, T.; Arnaud, P.; Mornex, J.F.;
#submission   submitted to the EMBL Data Library, March 1994
#description  Nucleotide sequence of ovine interleukin 8 cDNA using
#accession    S42496 polymerase chain reaction.
##status      preliminary
##molecule_type mRNA
##residues    1-101 ##label LEG
##cross-references EMBL:X78306; NID:g463253; PID:g463254
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY       #length 101 #molecular-weight 11292 #checksum 294
Query Match   76.5%; Score 78; DB 2; Length 101;
Best Local Similarity 66.7%; Pred. No. 4.52e-04;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

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Sat, Feb 5 15:14:39 2000

```

ORGANISM      #formal_name Sus scrofa domestica #common_name domestic pig
DATE          30-Apr-1993 #sequence_revision 18-Nov-1994 #text_change
              23-Feb-1996
ACCESSIONS    A44253
REFERENCE      A44253
#authors      Goodman, R.B.; Foster, D.C.; Mathewes, S.L.; Osborn, S.G.;
              Kuijper, J.L.; Forstrom, J.W.; Martin, T.R.
#journal      Biochemistry (1992) 31:10483-10490
#title        Molecular cloning of porcine alveolar macrophage-derived
              neutrophil chemotactic factors I and II; identification of
              porcine IL-8 and another intercrine-alpha protein.
#cross-references MUID:93041741
#accession     A44253
#status        preliminary
#molecule_type mRNA; protein
#residues      1-103 #label GOO
#experimental_source alveolar macrophage
#note          sequence extracted from NCBI backbone (NCBIN:117415,
              NCBIF:117416)
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY        #length 103 #molecular-weight 11677 #checksum 8904

Query Match 76.5%; Score 78; DB 2; Length 103;
Best Local Similarity 66.7%; Pred. No. 4.52e-04;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 75 EVCLDPKRWQ 86
   :|||:|:|:|:|
QY 1 QVCIDPKLWQ 12

RESULT 10
ENTRY   I48148 #type complete
TITLE   Neutrophil attractant protein-1 - guinea pig
ORGANISM #formal_name Cavia porcellus #common_name guinea pig
DATE    02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change
              23-Feb-1997
ACCESSIONS I48148
REFERENCE   I48148
#authors    Yoshimura, T.; Johnson, D.G.
#journal    J. Immunol. (1993) 151:6225-6236
#title      cDNA cloning and expression of guinea pig neutrophil
              attractant protein-1 (NAP-1): NAP-1 is highly conserved in
              guinea pig.
#cross-references MUID:94065176
#accession     I48148
#status        preliminary; translated from GB/EMBL/DBJ
#molecule_type DNA
#residues      1-101 #label RES
#cross-references GB:L04986; NID:g459764; PID:g459765

GENETICS      NAP-1
#gene          NAP-1
#superfamily   beta-thromboglobulin
CLASSIFICATION #length 101 #molecular-weight 11414 #checksum 2363
SUMMARY

Query Match 74.5%; Score 76; DB 2; Length 101;
Best Local Similarity 66.7%; Pred. No. 1.17e-03;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 75 QLCIDPKRWQ 86
   :|||:|:|:|:|
QY 1 QVCIDPKLWQ 12

RESULT 11
ENTRY   A60299 #type complete
TITLE   monocyte chemoattractant protein 1 precursor - human
ALTERNATE_NAMES GDGF-1; glioma-derived monocyte chemotactic factor 1; MCAF;
              MCP-1; monocyte chemotactic factor 1; monocyte secretory
              protein; tumor-derived chemotactic factor
              (GDCF-2)
              glioma-derived chemotactic factor 2 (GDCF-2)
              #formal_name Homo sapiens #common_name man
              20-Feb-1993 #sequence_revision 20-Feb-1993 #text_change
              DATE

ORGANISM      #formal_name Sus scrofa domestica #common_name domestic pig
DATE          21-Feb-1997 #sequence_revision 21-Feb-1997 #text_change
              09-May-1997
ACCESSIONS    I46997
REFERENCE      I46997
#authors      Seow, H.F.; Yoshimura, T.; Wood, P.R.; Colditz, I.G.
#journal      Immunol. Cell Biol. (1994) 72:398-405
#title        Cloning, sequencing, expression and inflammatory activity in
              skin of ovine interleukin-8.
#cross-references MUID:95137691
#accession     I46997
#status        preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues      1-101 #label SEO
#cross-references GB:S74436; NID:g786590; PID:g786591

GENETICS      oIL-8
#gene          oIL-8
#superfamily   beta-thromboglobulin
CLASSIFICATION #length 101 #molecular-weight 11292 #checksum 294
SUMMARY

Query Match 76.5%; Score 78; DB 2; Length 101;
Best Local Similarity 66.7%; Pred. No. 4.52e-04;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 75 EVCLDPKRWQ 86
   :|||:|:|:|:|
QY 1 QVCIDPKLWQ 12

RESULT 8
ENTRY   A53096 #type complete
TITLE   interleukin-8 precursor - pig
ORGANISM #formal_name Sus scrofa domestica #common_name domestic pig
DATE    02-Jun-1995 #sequence_revision 02-Jun-1995 #text_change
              08-Sep-1997
ACCESSIONS    A53096
REFERENCE      A53096
#authors      Lin, G.; Pearson, A.E.; Scamurra, R.W.; Zhou, Y.; Baarsch,
              M.J.; Weiss, D.J.; Murtaugh, M.P.
#journal      J. Biol. Chem. (1994) 269:77-85
#title        Regulation of interleukin-8 expression in porcine alveolar
              macrophages by bacterial lipopolysaccharide.
#cross-references MUID:94103307
#accession     A53096
#status        preliminary
#molecule_type mRNA
#residues      1-103 #label LIN
#cross-references GB:M86923; NID:g164520; PID:g164521
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY        #length 103 #molecular-weight 11633 #checksum 8835

Query Match 76.5%; Score 78; DB 2; Length 103;
Best Local Similarity 66.7%; Pred. No. 4.52e-04;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 75 EVCLDPKRWQ 86
   :|||:|:~|:|
QY 1 QVCIDPKLWQ 12

RESULT 9
ENTRY   A44253 #type complete
TITLE   alveolar macrophage chemotactic factor-1 (AMCF-I)
              interleukin-8 homolog - pig

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ACCESSIONS      20-Mar-1998
A33474; A33476; S03339; I51841; A60299; A32300; A32396;
REFERENCE
#authors      Robinson, E.A.; Yoshimura, T.; Leonard, E.J.; Tanaka, S.;
#journal      Griffin, P.R.; Shabanowitz, J.; Hunt, D.F.; Appella, E.
#title        Complete amino acid sequence of a human monocyte
               chemoattractant, a putative mediator of cellular immune
               reactions.
#cross-references MUID:90290466
#accession     A35474
#molecule_type DNA
#residues      1-99 #label SHY
#cross-references GB:M37719; NID:g187447; PID:g487124
REFERENCE
#authors      Rollins, B.J.; Stier, P.; Ernst, T.; Wong, G.G.
#journal      Mol. Cell. Biol. (1989) 9:4687-4695
#title        The human homolog of the JE gene encodes a monocyte secretory
               protein.
#cross-references MUID:90097880
#accession     A33476
#molecule_type mRNA
#residues      1-99 #label ROL
#cross-references GB:M30816; GB:M31625; GB:M31626; NID:g188701;
               PID:g386961
REFERENCE
#authors      Yoshimura, T.; Yuhki, N.; Moore, S.K.; Appella, E.; Lerman,
               M.I.; Leonard, E.J.
#journal      FEBS Lett. (1989) 244:487-493
#title        Human monocyte chemoattractant protein-1 (MCP-1). Full-length
               cDNA cloning, expression in mitogen-stimulated blood
               mononuclear leukocytes, and sequence similarity to mouse
               competence gene JE.
#cross-references MUID:89153605
#accession     S03339
#status        not compared with conceptual translation
#molecule_type mRNA
#residues      1-99 #label YOS
#cross-references GB:X14768; NID:g34513; PID:g34514
#experimental_source glioma cell line U-105MG
REFERENCE
#authors      Yoshimura, T.; Leonard, E.J.
#journal      Adv. Exp. Med. Biol. (1991) 305:47-56
#title        Human monocyte chemoattractant protein-1 (MCP-1).
#cross-references MUID:92095166
#accession     I51841
#status        preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues      1-99 #label YO2
#cross-references GB:S71513; NID:g240867; PID:g240868
REFERENCE
#authors      Bottazzi, B.; Colotta, F.; Sica, A.; Nobili, N.; Mantovani,
               A.; Int. J. Cancer (1990) 45:795-797
#journal      A chemoattractant expressed in human sarcoma cells
               (tumor-derived chemoattractant factor, TDCF) is identical to
               monocyte chemoattractant protein-1/monocyte chemoattractant and
               activating factor (MCP-1/MCAF).
#accession     A60299
#status        not compared with conceptual translation
#molecule_type mRNA
#residues      1-99 #label BOT
REFERENCE
#authors      Furutani, Y.; Nomura, H.; Notake, M.; Oyanada, Y.; Fukui, T.;
               Yamada, M.; Larsen, C.G.; Oppenheim, J.J.; Matsushima, K.
#journal      Biochem. Biophys. Res. Commun. (1989) 159:249-255
#title        Cloning and sequencing of the cDNA for human monocyte
               chemoattractant and activating factor (MCAF).
#cross-references MUID:89165862
#accession     A32300
#status        not compared with conceptual translation
#molecule_type mRNA
#residues      1-99 #label FUR
#cross-references GB:M24545; NID:g187434; PID:g307163

REFERENCE
#authors      Robinson, E.A.; Yoshimura, T.; Leonard, E.J.; Tanaka, S.;
               Griffin, P.R.; Shabanowitz, J.; Hunt, D.F.; Appella, E.
#journal      Proc. Natl. Acad. Sci. U.S.A. (1989) 86:1850-1854
#title        Complete amino acid sequence of a human monocyte
               chemoattractant, a putative mediator of cellular immune
               reactions.
#cross-references MUID:89184525
#accession     A32396
#molecule_type protein
#residues      'X', 25-99 #label ROB
REFERENCE
#authors      DeCock, B.; Conings, R.; Lenaerts, J.P.; Billiau, A.; Van
               Damme, J.
#journal      Biochem. Biophys. Res. Commun. (1990) 167:904-909
#title        Identification of the monocyte chemoattractant protein from human
               osteosarcoma cells and monocytes: detection of a novel
               N-terminally processed form.
#cross-references MUID:90211336
#accession     I57488
#molecule_type protein
#residues      29-33, 'XX', 36-52; 82-92 #label DEC
REFERENCE
#authors      Li, Y.S.; Shyy, Y.J.; Wright, J.G.; Valente, A.J.; Cornhill,
               J.F.; Kolattukudy, P.E.
#journal      Mol. Cell. Biochem. (1993) 126:61-68
#title        The expression of monocyte chemoattractant protein (MCP-1) in
               human vascular endothelium in vitro and in vivo.
#cross-references MUID:94150478
#accession     I57488
#status        translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues      1-99 #label LIY
#cross-references GB:S69738; NID:g545464; PID:g545465
REFERENCE
#authors      Ye, Q.N.; Su, G.F.; Yuan, Y.; Huang, C.F.
#journal      Chinese J. Microbiol. Immunol. (1994) 14:29-32
#title        The PCR, cloning and sequencing of human monocyte
               chemoattractant protein-1 (MCP-1) gene.
#accession     JCI096
#molecule_type mRNA
#residues      24-28, 'Q', 30-99 #label YEQ
GENETICS
#gene          GDB:SCYA2
#cross-references GDB:125279; OMIM:158105
#map_position  17q11.2-17q12
CLASSIFICATION
KEYWORDS       Superfamily macrophage inflammatory protein
               cytokine; glycoprotein; inflammation; pyroglutamic acid
FEATURE
1-23          #domain signal sequence #status predicted #label SIG\
24-99         #product monocyte chemoattractant protein 1 #status
               experimental #label MAT\
29-99         #product monocyte chemoattractant protein 1, short form
               #status experimental #label MAT2\
24           #modified_site pyrrolidone carboxylic acid (Gln) (in
               mature form) #status experimental\
37           #binding_site carbohydrate (Asn) (covalent) #status
               predicted
SUMMARY
length 99 #molecular-weight 11025 #checksum 7984
Query Match 73.5%; Score 75; DB 2; Length 99;
Best Local Similarity 58.3%; Pred. No. 1.88e-03;
Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;
Db 73 EICADPKQKWKVQ 84
QY 1 QVCIDPKLKWIQ 12
RESULT 12
ENTRY JC2136
TITLE monocyte chemoattractant protein-1 precursor - pig
ORGANISM #formal_name Sus scrofa domestica #common_name domestic pig

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US-09-150-813-38.rpr

Sat_Feb 5 15:14:39 2000

```

##residues      23-33,'X','35','X',37-46,'X',48-49,'I',51-53 ##label BEA
CLASSIFICATION #superfamily beta-thromboglobulin
KEYWORDS       cytokine
SUMMARY        #length 101 #molecular-weight 11402 #checksum 1085

Query Match      70.6%; Score 72; DB 2; Length 101;
Best Local Similarity 58.3%; Pred. No. 7.60e-03;
Matches          7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 75 ELCADPKKQWQ 86
QY 1 QVCIDPKLKWQ 12

RESULT 14
ENTRY 146857 #type complete
TITLE monocyte chemoattractant protein-1 - rabbit
ORGANISM #formal_name Oryctolagus cuniculus #common_name domestic
        rabbit
DATE 14-Feb-1997 #sequence_revision 14-Feb-1997 #text_change
        09-May-1997
ACCESSIONS I46857
REFERENCE Yoshimura, T.; Yuhki, N.
#authors J. Immunol. (1991) 146:3483-3488
#journal Neutrophil attractant/activation protein-1 and monocyte
#title chemoattractant protein-1 in rabbit: cDNA cloning and their
        expression in spleen cells.
#cross-references MUID:91225489
#accession I46857
#status preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-125 #label YOS
#cross-references GB:M57440; NID:g165469; PID:g165470
CLASSIFICATION #superfamily macrophage inflammatory protein
SUMMARY #length 125 #molecular-weight 13776 #checksum 4498

Query Match      70.6%; Score 72; DB 2; Length 125;
Best Local Similarity 63.6%; Pred. No. 7.60e-03;
Matches          7; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 74 ICADPKKQWQ 84
QY 2 VCIDPKLKWQ 12

RESULT 15
ENTRY JC2336 #type complete
TITLE monocyte chemoattractant protein-1 - bovine
ORGANISM #formal_name Bos primigenius indicus #common_name zebu cattle
DATE 20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change
        03-May-1996
ACCESSIONS JC2336
REFERENCE Wempe, F.; Kuhlmann, J.K.; Scheit, K.H.
#authors Biochem. Biophys. Res. Commun. (1994) 202:1272-1279
#journal Characterization of the bovine monocyte chemoattractant
#title protein-1 gene.
#cross-references MUID:94338337
#accession JC2336
#molecule_type protein
#residues 1-99 #label WEM

GENETICS MCP-1
#gene 26/1; 65/2
#introns #superfamily macrophage inflammatory protein
CLASSIFICATION #length 99 #molecular-weight 11114 #checksum 9401
SUMMARY

Query Match      69.6%; Score 71; DB 2; Length 99;
Best Local Similarity 58.3%; Pred. No. 1.20e-02;
Matches          7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 73 ELCADPKKQWQ 84

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30-Sep-1993 #sequence_revision 20-Aug-1994 #text_change
17-Mar-1999
JC2136; S57498
JC2136 Hosang, K.; Knoke, I.; Klaudiny, J.; Wempe, F.; Wuttke, W.;
        Scheit, K.H.
#authors Biochem. Biophys. Res. Commun. (1994) 199:962-968
#journal Porcine luteal cells express monocyte chemoattractant
#title protein-1 (MCP-1): Analysis by polymerase chain reaction
        and cDNA cloning.
#cross-references MUID:94183284
#accession JC2136
#molecule_type mRNA
#residues 1-99 #label HOS
REFERENCE S57497
#authors Zach, O.
#submission submitted to the EMBL Data Library, July 1994
#accession S57498
#status preliminary
#molecule_type mRNA
#residues 1-99 #label ZAC
#cross-references EMBL:X79416; NID:g872312; PID:g872313
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS glycoprotein
FEATURE #domain signal sequence #status predicted #label SIG\
        #product monocyte chemoattractant protein-1 #status
        #predicted #label MAT\
        #binding-site carbohydrate (Asn) (covalent) #status
        predicted
SUMMARY #length 99 #molecular-weight 10976 #checksum 9768

Query Match      72.5%; Score 74; DB 2; Length 99;
Best Local Similarity 50.0%; Pred. No. 3.00e-03;
Matches          6; Conservative 4; Mismatches 2; Indels 0; Gaps 0;

Db 73 EICADPKKQWQ 84
QY 1 QVCIDPKLKWQ 12

RESULT 13
ENTRY I46871 #type complete
TITLE interleukin-8 rabbit
ALTERNATE_NAMES Neutrophil attractant/activation protein-1
ORGANISM #formal_name Oryctolagus cuniculus #common_name domestic
        rabbit
DATE 14-Feb-1997 #sequence_revision 14-Feb-1997 #text_change
        09-Aug-1997
ACCESSIONS I46871; S13052
REFERENCE Yoshimura, T.; Yuhki, N.
#authors J. Immunol. (1991) 146:3483-3488
#journal Neutrophil attractant/activation protein-1 and monocyte
#title chemoattractant protein-1 in rabbit: cDNA cloning and their
        expression in spleen cells.
#cross-references MUID:91225489
#accession I46871
#status preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-101 #label YOS
#cross-references GB:M57439; NID:g165552; PID:g165553
REFERENCE S13052
#authors Beaubien, B.C.; Collins, P.D.; Jose, P.J.; Totty, N.F.;
        Hsuan, J.; Waterfield, M.D.; Williams, T.J.
#journal Biochem. J. (1990) 271:797-801
#title A novel neutrophil chemoattractant generated during an
        inflammatory reaction in the rabbit peritoneal cavity in
        vivo. Purification, partial amino acid sequence and
        structural relationship to interleukin 8.
#cross-references MUID:91058518
#accession S13052
#molecule_type protein

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OY :.:| ||| |.:|
 1 QVCIDPKLKWIO 12

Search completed: Fri Feb 4 17:03:37 2000
Job time : 22 secs.

US-09-150-813-38.rpr

 W P S R E L E
 (TM)

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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm
 Run on: Fri Feb 4 17:02:38 2000; Maspar time 3.51 Seconds
 72.732 Million cell updates/sec
 Tabular output not generated.

Title: >US-09-150-813-38
 Description: (1-12) from US09150813.pep
 Perfect Score: 102
 Sequence: 1 QVCIDPKLKWIQ 12

Scoring table: PAM 150
 Gap 15

Searched: 170751 seqs, 21266608 residues

Post-processing: Minimum Match 0%
 Listing first 45 summaries

Database: a-geneseq35
 1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
 8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
 14:part14 15:part15 16:part16 17:part17 18:part18
 19:part19 20:part20 21:part21 22:part22 23:part23
 24:part24 25:part25 26:part26 27:part27 28:part28
 29:part29 30:part30 31:part31 32:part32 33:part33
 34:part34 35:part35 36:part36 37:part37 38:part38
 39:part39

Statistics: Mean 19.335; Variance 66.726; scale 0.290

Pred. No. is the number of results predicted by chance to have a
 score greater than or equal to the score of the result being printed,
 and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description	Pred. No.
1	102	100.0	67	31	Peptide which binds t	2.78e-03
2	102	100.0	68	31	Peptide which binds t	2.78e-03
3	102	100.0	72	31	Peptide which binds t	2.78e-03
4	102	100.0	73	31	Peptide which binds t	2.78e-03
5	102	100.0	89	13	Human SDF-1-alpha	2.78e-03
6	102	100.0	89	31	Peptide #1	2.78e-03
7	102	100.0	89	12	Protein encoded by cd	2.78e-03
8	102	100.0	93	31	Peptide #2	2.78e-03
9	102	100.0	93	31	Human SDF-1 which is	2.78e-03
10	102	100.0	93	13	Human SDF-1-beta	2.78e-03
11	102	100.0	326	35	Human chemokine SDF-1	2.78e-03
12	102	100.0	328	35	Human chemokine SDF-1	2.78e-03
13	76	74.5	99	2	Human MCF precursor	1.42e+00
14	75	73.5	66	24	Monocyte chemoattract	1.80e+00
15	75	73.5	67	24	Monocyte chemoattract	1.80e+00
16	75	73.5	68	24	Monocyte chemoattract	1.80e+00

ID	W50760	standard; peptide; 67 AA.	RESULT	1	75	73.5	69	24	W13596	Monocyte chemoattract	1.80e+00
AC	W50760	standard; peptide; 67 AA.	DE	27-JUL-1998 (first entry)	75	73.5	69	14	R87678	des(2-8) MCP-1.	1.80e+00
DE	27-JUL-1998 (first entry)	75	73.5	69	14	R87678	69	14	R87678	Macrophage chemoattract	1.80e+00
KW	Stromal cell-derived chemokine; SDF-1; human immunodeficiency virus;	75	73.5	76	30	W40175	76	30	W40175	Monocyte chemotactic	1.80e+00
OS	Homo sapiens.	75	73.5	76	5	R28660	76	5	R28660	MCF.	1.80e+00
PN	FR2751658-A1.	75	73.5	76	14	R87676	76	14	R87676	(24-Arg) MCP-1.	1.80e+00
PD	30-JAN-1998.	75	73.5	76	21	W11131	76	21	W11131	Mature human monocyte	1.80e+00
PF	26-JUL-1996; 009477.	75	73.5	76	14	R87680	76	14	R87680	Monocyte chemotactic	1.80e+00
PR	26-JUL-1996; FR-009477.	75	73.5	76	10	R53398	76	10	R53398	Sense MCP-1.	1.80e+00
PA	(INSP) INST PASTEUR.	75	73.5	76	14	R87675	76	14	R87675	(28-Asp) MCP-1.	1.80e+00
PI	Arenzana SF, Baggiolini M, Clark LI, Moser B, Virelizier JL;	75	73.5	76	1	P90292	76	1	P90292	Peptide from human gl	1.80e+00
DR	WPI; 98-123039/12.	75	73.5	76	14	R87677	76	14	R87677	(3-Ala) MCP-1.	1.80e+00
PT	Human stromal cell-derived chemokine, SDF-1 - useful for treating	75	73.5	77	15	R86859	77	15	R86859	Mature MCP-1.	1.80e+00
FS	human immunodeficiency virus infection	75	73.5	77	15	R86859	77	15	R86859	Mature MCP-1.	1.80e+00
CC	Claim 2; Page 29; 48pp; French.	75	73.5	77	15	R86859	77	15	R86859	Mature MCP-1.	1.80e+00
CC	The invention relates to peptides which bind to a cellular receptor for	75	73.5	77	15	R86859	77	15	R86859	Mature MCP-1.	1.80e+00
CC	CXC chemokines, namely the CXCR4 receptor (also known as leukocyte-	75	73.5	77	15	R86859	77	15	R86859	Mature MCP-1.	1.80e+00
CC	expressed transmembrane domain receptor), especially where the	75	73.5	77	15	R86859	77	15	R86859	Mature MCP-1.	1.80e+00
CC	peptide is human chemokine SDF-1. The peptide can be used to treat or	75	73.5	77	15	R86859	77	15	R86859	Mature MCP-1.	1.80e+00
CC	prevent HIV infections, optionally together with reverse transcriptase	75	73.5	77	15	R86859	77	15	R86859	Mature MCP-1.	1.80e+00
CC	inhibitors, viral protease inhibitors, soluble CD4 receptors, CD4	75	73.5	77	15	R86859	77	15	R86859	Mature MCP-1.	1.80e+00
CC	receptor antagonists, immunotherapy agents, agents for treating HIV-	75	73.5	77	15	R86859	77	15	R86859	Mature MCP-1.	1.80e+00
CC	associated opportunistic infections and/or other CXC or CC chemokines,	75	73.5	77	15	R86859	77	15	R86859	Mature MCP-1.	1.80e+00
CC	especially RANTES, MIP-1, MIP-1, MIP-1, MIP-1. The peptide can be	75	73.5	77	15	R86859	77	15	R86859	Mature MCP-1.	1.80e+00
CC	used to detect anti-SDF-1 antibodies in biological fluids. This	75	73.5	77	15	R86859	77	15	R86859	Mature MCP-1.	1.80e+00
CC	sequence represents a specifically claimed peptide which binds to the	75	73.5	77	15	R86859	77	15	R86859	Mature MCP-1.	1.80e+00
CC	CXCR4 receptor.	75	73.5	77	15	R86859	77	15	R86859	Mature MCP-1.	1.80e+00
SQ	Sequence 67 AA;	75	73.5	77	15	R86859	77	15	R86859	Mature MCP-1.	1.80e+00

ALIGNMENTS

RESULT 1
 ID W50760 standard; peptide; 67 AA.

DE Peptide which binds to CXCR4 receptor and is useful for treating HIV.
 KW Stromal cell-derived chemokine; SDF-1; human immunodeficiency virus;
 OS Homo sapiens.
 PN FR2751658-A1.
 PD 30-JAN-1998.
 PF 26-JUL-1996; 009477.
 PR 26-JUL-1996; FR-009477.
 PA (INSP) INST PASTEUR.
 PI Arenzana SF, Baggiolini M, Clark LI, Moser B, Virelizier JL;
 DR WPI; 98-123039/12.
 PT Human stromal cell-derived chemokine, SDF-1 - useful for treating
 FS human immunodeficiency virus infection
 CC Claim 2; Page 29; 48pp; French.
 CC The invention relates to peptides which bind to a cellular receptor for
 CC CXC chemokines, namely the CXCR4 receptor (also known as leukocyte-
 CC expressed transmembrane domain receptor), especially where the
 CC peptide is human chemokine SDF-1. The peptide can be used to treat or
 CC prevent HIV infections, optionally together with reverse transcriptase
 CC inhibitors, viral protease inhibitors, soluble CD4 receptors, CD4
 CC receptor antagonists, immunotherapy agents, agents for treating HIV-
 CC associated opportunistic infections and/or other CXC or CC chemokines,
 CC especially RANTES, MIP-1, MIP-1, MIP-1, MIP-1. The peptide can be
 CC used to detect anti-SDF-1 antibodies in biological fluids. This
 CC sequence represents a specifically claimed peptide which binds to the
 CC CXCR4 receptor.
 SQ Sequence 67 AA;

Query Match 100.0%; Score 102; DB 31; Length 67;
 Best Local Similarity 100.0%; Pred. No. 2.78e-03;

Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 qvcidpklkwig 59

QY 1 QVCIDPKLKWIQ 12

RESULT 2
 ID W50761 standard; peptide; 68 AA.
 AC W50761;
 DT 27-JUL-1998 (first entry)
 DE Peptide which binds to CXCR4 receptor and is useful for treating HIV.
 KW Stromal cell-derived chemokine; SDF-1; human immunodeficiency virus;
 KW HIV; CXCR4 receptor; leukocyte-expressed transmembrane domain receptor.
 OS Homo sapiens.
 PN FR2751658-A1.
 PD 30-JAN-1998.
 PF 26-JUL-1996; 009477.
 PR 26-JUL-1996; FR-009477.
 PA (INSP) INST PASTEUR.
 PI Arenzana SF, Baggiolini M, Clark LI, Moser B, Virelizier JL;
 DR WPI; 98-123039/12.
 PT Human stromal cell-derived chemokine, SDF-1 - useful for treating
 PT human immunodeficiency virus infection
 PS Claim 5; Page 29; 48pp; French.
 CC The invention relates to peptides which bind to a cellular receptor for
 CC CXCR4 chemokines, namely the CXCR4 receptor (also known as leukocyte-
 CC expressed transmembrane domain receptor), especially where the
 CC peptide is human chemokine SDF-1. The peptide can be used to treat or
 CC prevent HIV infections, optionally together with reverse transcriptase
 CC inhibitors, viral protease inhibitors, soluble CD4 receptors, CD4
 CC receptor antagonists, immunotherapy agents, agents for treating HIV-
 CC associated opportunistic infections and/or other CXC or CC chemokines,
 CC especially RANTES, MIP1- alpha , MIP1- beta or MCP1. The peptide can be
 CC used to detect anti-SDF-1 antibodies in biological fluids. This
 CC sequence represents a specifically claimed peptide which binds to the
 CC CXCR4 receptor.
 CC CXCR4 receptor.
 SQ Sequence 68 AA;

Query Match 100.0%; Score 102; DB 31; Length 68;
 Best Local Similarity 100.0%; Pred. No. 2.78e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Db 49 qvcidpklkwiq 60
 | | | | | | | | | |
 QY 1 QVCIDPKLKWIQ 12

RESULT 3
 ID W50762 standard; peptide; 72 AA.
 AC W50762;
 DT 27-JUL-1998 (first entry)
 DE Peptide which binds to CXCR4 receptor and is useful for treating HIV.
 KW Stromal cell-derived chemokine; SDF-1; human immunodeficiency virus;
 KW HIV; CXCR4 receptor; leukocyte-expressed transmembrane domain receptor.
 OS Homo sapiens.
 PN FR2751658-A1.
 PD 30-JAN-1998.
 PF 26-JUL-1996; 009477.
 PR 26-JUL-1996; FR-009477.
 PA (INSP) INST PASTEUR.
 PI Arenzana SF, Baggiolini M, Clark LI, Moser B, Virelizier JL;
 DR WPI; 98-123039/12.
 PT Human stromal cell-derived chemokine, SDF-1 - useful for treating
 PT human immunodeficiency virus infection
 PS Claim 5; Page 29; 48pp; French.
 CC The invention relates to peptides which bind to a cellular receptor for
 CC CXCR4 chemokines, namely the CXCR4 receptor (also known as leukocyte-
 CC expressed transmembrane domain receptor), especially where the
 CC peptide is human chemokine SDF-1. The peptide can be used to treat or
 CC prevent HIV infections, optionally together with reverse transcriptase
 CC inhibitors, viral protease inhibitors, soluble CD4 receptors, CD4
 CC receptor antagonists, immunotherapy agents, agents for treating HIV-
 CC associated opportunistic infections and/or other CXC or CC chemokines,
 CC especially RANTES, MIP1- alpha , MIP1- beta or MCP1. The peptide can be
 CC used to detect anti-SDF-1 antibodies in biological fluids. This
 CC sequence represents a specifically claimed peptide which binds to the
 CC CXCR4 receptor.
 CC CXCR4 receptor.
 SQ Sequence 72 AA;

Query Match 100.0%; Score 102; DB 31; Length 72;
 Best Local Similarity 100.0%; Pred. No. 2.78e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Db 48 qvcidpklkwiq 59
 | | | | | | | | | |
 QY 1 QVCIDPKLKWIQ 12

RESULT 4
 ID W50763 standard; peptide; 73 AA.
 AC W50763;
 DT 27-JUL-1998 (first entry)
 DE Peptide which binds to CXCR4 receptor and is useful for treating HIV.
 KW Stromal cell-derived chemokine; SDF-1; human immunodeficiency virus;
 KW HIV; CXCR4 receptor; leukocyte-expressed transmembrane domain receptor.
 OS Homo sapiens.
 PN FR2751658-A1.
 PD 30-JAN-1998.
 PF 26-JUL-1996; 009477.
 PR 26-JUL-1996; FR-009477.
 PA (INSP) INST PASTEUR.
 PI Arenzana SF, Baggiolini M, Clark LI, Moser B, Virelizier JL;
 DR WPI; 98-123039/12.
 PT Human stromal cell-derived chemokine, SDF-1 - useful for treating
 PT human immunodeficiency virus infection
 PS Claim 5; Page 29; 48pp; French.
 CC The invention relates to peptides which bind to a cellular receptor for
 CC CXCR4 chemokines, namely the CXCR4 receptor (also known as leukocyte-
 CC expressed transmembrane domain receptor), especially where the
 CC peptide is human chemokine SDF-1. The peptide can be used to treat or
 CC prevent HIV infections, optionally together with reverse transcriptase
 CC inhibitors, viral protease inhibitors, soluble CD4 receptors, CD4
 CC receptor antagonists, immunotherapy agents, agents for treating HIV-
 CC associated opportunistic infections and/or other CXC or CC chemokines,
 CC especially RANTES, MIP1- alpha , MIP1- beta or MCP1. The peptide can be
 CC used to detect anti-SDF-1 antibodies in biological fluids. This
 CC sequence represents a specifically claimed peptide which binds to the
 CC CXCR4 receptor.
 CC CXCR4 receptor.
 SQ Sequence 73 AA;

Query Match 100.0%; Score 102; DB 31; Length 73;
 Best Local Similarity 100.0%; Pred. No. 2.78e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Db 49 qvcidpklkwiq 60
 | | | | | | | | | |
 QY 1 QVCIDPKLKWIQ 12

RESULT 5
 ID R75419 standard; Protein; 89 AA.
 AC R75419;
 DT 15-NOV-1995 (first entry)
 DE Human SDF-1-alpha.
 KW SDF-1-alpha; stromal derived factor; hematopoietic cell;
 KW inflammatory disease; infectious disease; AIDS;
 KW neurodegenerative disease.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT Peptide 1..21
 FT CA2117953-A.
 PN 15-APR-1995.
 PD 12-OCT-1994; 117953.
 PR 14-OCT-1993; JP-280505.
 PA (ONOF) ONO PHARM CO LTD.
 PI Honjo T, Shirozu M, Tada H;
 DR WPI; 95-207311/28.
 DR N-PSDB; Q74086; Q74089.
 PT Polypeptide(s) used for treating diseases relating to undergrown or
 PT abnormal proliferation of haematopoietic cells - e.g. inflammatory

FT diseases, infectious diseases, AIDS or neurodegenerative diseases
 PS Claim 2: Page 22: 43pp; English.
 CC A CDNA library prepared from human pro-B cell line FLEB14 cells was
 CC screened with 32p-labeled mouse SDF-1-alpha cDNA. A positive clone
 CC contained an insert of 1.9 kb (Q74089), including an ORF (Q74089)
 CC encoding human SDF-1-alpha (R75419). Recombinant hSDF-1-alpha was
 CC produced in E. coli and COS cells.
 SQ Sequence 89 AA;

Query Match 100.0%; Score 102; DB 13; Length 89;
 Best Local Similarity 100.0%; Pred. No. 2.78e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 69 qvcidpklkwiq 80
 QY 1 QVCIDPKLKWQ 12

RESULT 6
 ID W50764 standard; peptide; 89 AA.
 AC W50764; (first entry)
 DE Peptide #1.
 CC Stromal cell-derived chemokine; SDF-1; human immunodeficiency virus;
 CC HIV; CXCR4 receptor; leukocyte-expressed transmembrane domain receptor.
 OS Synthetic.
 PN FR2751658-A1.
 PD 30-JAN-1998.
 PF 26-JUL-1996; FR-009477.
 PR (INSP) INST PASTEUR.
 PA Arenzana SF, Baggiolini M, Clark LI, Moser B, Virelizier JL;
 PI WPI; 98-123039/12.
 DR Human stromal cell-derived chemokine, SDF-1 - useful for treating
 PT human immunodeficiency virus infection
 PS Claim 10: Page 30: 48pp; French.
 CC The invention relates to peptides which bind to a cellular receptor for
 CC CXCR4 chemokines, namely the CXCR4 receptor (also known as leukocyte-
 CC expressed transmembrane domain receptor), especially where the
 CC peptide is human chemokine SDF-1. The peptide can be used to treat or
 CC prevent HIV infections, optionally together with reverse transcriptase
 CC inhibitors, viral protease inhibitors, soluble CD4 receptors, CD4
 CC receptor antagonists, immunotherapy agents, agents for treating HIV-
 CC associated opportunistic infections and/or other CXCR4 or CC chemokines,
 CC especially RANTES, MIP1-alpha, MIP1-beta or MCP1. The peptide can be
 CC used to detect anti-SDF-1 antibodies in biological fluids. Peptides
 CC of the invention include sequences containing at least 50 per cent
 CC identical amino acid residues to W50760 with the exception of the
 CC sequences W50764-5.
 SQ Sequence 89 AA;

Query Match 100.0%; Score 102; DB 31; Length 89;
 Best Local Similarity 100.0%; Pred. No. 2.78e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 69 qvcidpklkwiq 80
 QY 1 QVCIDPKLKWQ 12

RESULT 7
 ID R70994 standard; protein; 89 AA.
 AC R70994; 1995 (first entry)
 DE Protein encoded by cDNA derived from mouse stroma cell line ST2.
 CC Mouse; stroma; cell line; ST2; primer: polymerase chain reaction;
 CC amplify; PCR; linker; plasmid; expression vector; pSRT; infection;
 CC transformation; E.coli DH5 alpha; CDNA library; signal peptide;
 CC anaemia; leukopaenia.
 OS Mus musculus.
 PN Key Location/Qualifiers
 FT peptide 1..19
 FT /note= "Signal peptide"

FT protein 20..89 /note= "protein N-terminal fragment"
 FT
 PN EP-607054-A.
 PD 20-JUL-1994.
 PF 14-JAN-1994; 300267.
 PR 14-JAN-1993; JP-022098.
 PA (HONJ) HONJO I.
 PI (ONJO) ONO PHARM CO LTD.
 PI Honjo T, Tade H, Tashiro K;
 DR WPI; 94-226973/28.
 DR N-PSDB: Q86248.
 DR Construction of a cDNA library which has selectivity for signal
 PT peptides - and novel peptide identified using the process, having
 PT application in the treatment of anaemia, leukopenia and
 PT infections
 PS Claim 3; Page 13-14; 26pp; English.
 CC This sequence is encoded by cDNA which was derived from the mouse
 CC stroma cell line, ST2. This cDNA sequence was isolated using the
 CC method of the invention. Total RNA was extracted from ST2 and using
 CC a random hexamer as a primer, single stranded DNA was synthesised and
 CC dt added to the 3' end. A 17mer dA ligated to a restriction site contg.
 CC EcoRI was annealed, and double stranded cDNA was synthesised using the
 CC same primer. The resulting cDNA was fragmented and cDNAs of 200-500 bp
 CC were isolated. After blunt-ending, a linker contg. a SacI site was
 CC ligated and the cDNAs again fractionated. Two primers, one with an
 CC EcoRI site and one with a SacI site were then used for PCR. The
 CC amplified cDNA was digested with EcoRI and SacI and cDNAs of 200-500
 CC bp fractionated. The cDNA was then ligated into a plasmid obt'd. by
 CC digestion of the expression vector, pSRT. After transformation of an
 CC E.coli DH5 alpha strain, a cDNA library having selectivity for signal
 CC peptides was obtained. The protein encoded by the isolated sequence is
 CC a useful agent in the treatment or prevention of anaemia, leukopaenia or
 CC infections.
 SQ Sequence 89 AA;

Query Match 100.0%; Score 102; DB 12; Length 89;
 Best Local Similarity 100.0%; Pred. No. 2.78e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 69 qvcidpklkwiq 80
 QY 1 QVCIDPKLKWQ 12

RESULT 8
 ID W50765 standard; peptide; 93 AA.
 AC W50765; 1998 (first entry)
 DE Peptide #2.
 CC Stromal cell-derived chemokine; SDF-1; human immunodeficiency virus;
 CC HIV; CXCR4 receptor; leukocyte-expressed transmembrane domain receptor.
 OS Synthetic.
 PN FR2751658-A1.
 PD 30-JAN-1998.
 PF 26-JUL-1996; FR-009477.
 PR 26-JUL-1996; FR-009477.
 PA (INSP) INST PASTEUR.
 PI Arenzana SF, Baggiolini M, Clark LI, Moser B, Virelizier JL;
 PI WPI; 98-123039/12.
 DR Human stromal cell-derived chemokine, SDF-1 - useful for treating
 PT human immunodeficiency virus infection
 PS Claim 10: Page 31: 48pp; French.
 CC The invention relates to peptides which bind to a cellular receptor for
 CC CXCR4 chemokines, namely the CXCR4 receptor (also known as leukocyte-
 CC expressed transmembrane domain receptor), especially where the
 CC peptide is human chemokine SDF-1. The peptide can be used to treat or
 CC prevent HIV infections, optionally together with reverse transcriptase
 CC inhibitors, viral protease inhibitors, soluble CD4 receptors, CD4
 CC receptor antagonists, immunotherapy agents, agents for treating HIV-
 CC associated opportunistic infections and/or other CXCR4 or CC chemokines,
 CC especially RANTES, MIP1-alpha, MIP1-beta or MCP1. The peptide can be
 CC used to detect anti-SDF-1 antibodies in biological fluids. Peptides
 CC of the invention include sequences containing at least 50 per cent
 CC identical amino acid residues to W50760 with the exception of the
 CC sequences W50764-5.
 SQ Sequence 89 AA;

CC Identical amino acid residues to W50760 with the exception of the
 CC sequences W50764-5.
 SQ Sequence 93 AA;

Query Match 100.0%; Score 102; DB 31; Length 93;
 Best Local Similarity 100.0%; Pred. No. 2.78e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Db 69 qvcidpklkwiq 80
 QY 1 QVCIDPKLKWQ 12

RESULT 9

ID W50766 standard; peptide; 93 AA.
 AC W50766;
 DT 27-JUL-1998 (first entry)
 DE Human SDF-1 which is useful for treating HIV.
 KW Stromal cell-derived chemokine; SDF-1; human immunodeficiency virus;
 KW HIV; CXCR4 receptor; leukocyte-expressed transmembrane domain receptor.
 OS Homo sapiens.
 PN FR2751638-A1.
 PD 30-JAN-1998.
 PR 26-JUL-1996; 009477.
 PR 26-JUL-1996; PR-009477.
 PA (INSP) INST PASTEUR.
 PI Arenzana SF, Baggiolini M, Clark LI, Moser B, Virelizier JL;
 DR WPI; 98-123039/12.
 DR P-PSDB; V07076.
 PT Human stromal cell-derived chemokine, SDF-1 - useful for treating
 PS human immunodeficiency virus infection
 PS Claim 4; Figure 5; 48pp; French.
 CC The invention relates to peptides which bind to a cellular receptor for
 CC CXCR4 chemokines, namely the CXCR4 receptor (also known as leukocyte-
 CC expressed transmembrane domain receptor), especially where the
 CC peptide is human chemokine SDF-1. The peptide can be used to treat or
 CC prevent HIV infections, optionally together with reverse transcriptase
 CC inhibitors, viral protease inhibitors, soluble CD4 receptors, CD4
 CC receptor antagonists, immunotherapy agents, agents for treating HIV.
 CC associated opportunistic infections and/or other CXCR4 or CXCR4 chemokines,
 CC especially RANTES, MIP1- alpha, MIP1- beta or MCP1. The peptide can be
 CC used to detect anti-SDF-1 antibodies in biological fluids. This
 CC sequence represents human SDF-1.
 SQ Sequence 93 AA;

Query Match 100.0%; Score 102; DB 31; Length 93;
 Best Local Similarity 100.0%; Pred. No. 2.78e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Db 69 qvcidpklkwiq 80
 QY 1 QVCIDPKLKWQ 12

RESULT 10

ID R75420 standard; Protein; 93 AA.
 AC R75420;
 DT 15-NOV-1995 (first entry)
 DE Human SDF-1-beta.
 KW SDF-1-beta; stromal derived factor; hematopoietic cell;
 KW inflammatory disease; infectious disease; AIDS;
 OS neurodegenerative disease.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT Peptide 1..21
 FT /label= Sig_peptide

CA2117953-A.
 PD 15-APR-1995.
 PR 12-OCT-1994; 117953.
 PR 14-OCT-1993; JP-280505.
 PA (ONJO) ONO PHARM CO LTD.
 PI Honjo T, Shirozu M, Tada H;
 DR WPI; 95-207311/28.

DR N-PSDB; Q74090; Q74091.
 PT Polypeptide(s) used for treating diseases relating to undergrowth or
 PT abnormal proliferation of haematopoietic cells - e.g. inflammatory
 PT diseases, infectious diseases, AIDS or neurodegenerative diseases
 PS Claim 12; Page 26-27; 43pp; English.
 CC A cDNA library prepared from human pro-B cell line FLEB14 cells was
 CC screened with 32P-labeled mouse SDF-1-alpha cDNA. A positive clone
 CC contained an insert of 3.5 kb (Q74091), including an ORF (Q74090)
 CC encoding human SDF-1-beta (R75420). Recombinant hSDF-1-beta was
 CC produced in E. coli and COS cells.
 SQ Sequence 93 AA;

Query Match 100.0%; Score 102; DB 13; Length 93;
 Best Local Similarity 100.0%; Pred. No. 2.78e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Db 69 qvcidpklkwiq 80
 QY 1 QVCIDPKLKWQ 12

RESULT 11

ID W76221 standard; Protein; 326 AA.
 AC W76221;
 DT 02-DEC-1998 (first entry)
 DE Human chemokine SDF-1-alpha domain protein from clone SK2-2.
 KW Chemokine; SDF-1-alpha; chimeric; human; heterologous protein; inhibitor;
 KW receptor; chemotaxis; migratory cell; angiogenesis; bone; regeneration;
 KW cartilage; ligament; tendon; bone marrow; transplant; inflammation;
 KW autoimmune disorder; vaccine adjuvant; antigen presenting cell; cancer;
 KW HIV; human immunodeficiency virus; therapy; prevention.
 OS Homo sapiens.
 OS Synthetic.
 FH Key Location/Qualifiers
 FT Peptide 1..30
 FT /label= signal
 FT /note= "signal peptide"
 FT Protein 31..326
 FT /label= SDF-1-alpha
 FT /note= "Chemokine domain"

WQ9838212-A2.
 PD 03-SEP-1998.
 PD 27-FEB-1998; U04002.
 PR 28-FEB-1997; US-808720.
 PA (GENY) GENETICS INST INC.
 PI Herrmann SH, Swanberg SL;
 DR WPI; 98-495387/42.
 DR N-PSDB; V56823.
 PT New chimeric polypeptide(s) - comprise chemokine SDF-1-alpha domain, isolated
 PT covalently linked to heterologous polypeptide, used for, e.g.
 PT chemotactic recruitment of migratory cells
 PS Claim 14c; Page 45-46; 69pp; English.

CC This sequence represents a human chemokine SDF-1-alpha domain, isolated
 CC from cDNA clone SK2-2. This sequence is used in the production of a
 CC construct comprising an isolated polynucleotide encoding a chimeric
 CC polypeptide which comprises at least 1 chemokine polypeptide covalently
 CC attached to at least 1 heterologous polypeptide. By including a
 CC heterologous protein in the construction, the chimeric polypeptides
 CC will have longer and increased biological, the chimeric polypeptides
 CC chemokine to a particular site. The chimeric polypeptides can also be
 CC designed to inhibit or desensitize chemokine receptors. They can be used
 CC to affect the chemotactic recruitment of migratory cells, e.g. for
 CC stimulating or inhibiting angiogenesis, for regeneration of bone,
 CC cartilage, ligament or tendon, for recruiting transplanted bone marrow
 CC cells to bone marrow, or for treating or preventing inflammatory or
 CC autoimmune disorders. They can also be used as vaccine adjuvants or to
 CC enhance the activity of antigen presenting cells and for treating or
 CC preventing HIV infection. Neutralising antibodies binding to the chimeric
 CC polypeptide may also be useful therapeutics for both conditions
 CC associated with the chemokine corresponding to the chemokine domain of
 CC the chimeric polypeptide and also in the treatment of some forms of
 CC cancer where abnormal expression of the chemokine is involved.
 SQ Sequence 326 AA;

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CC associated with the chemokine corresponding to the chemokine domain of
CC the chimeric polypeptide and also in the treatment of some forms of
CC cancer where abnormal expression of the chemokine is involved.

Query Match 100.0%; Score 102; DB 35; Length 326;
Best Local Similarity 100.0%; Pred. No. 2.78e-03;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 69 qvcidpklkwiq 78
| | | | | | | | | | | | | |
QY 1 QVCIDPKLKWIQ 12

RESULT 12 W76220 standard; Protein: 328 AA.

AC 02-DEC-1998 (first entry)
DE Human chemokine SDF-1alpha domain protein from clones SL-2/S1-3.
KW Chemokine; SDF-1alpha; chimeric; human; heterologous protein; inhibitor;
KW receptor; chemotaxis; migratory cell; angiogenesis; bone; regeneration;
KW cartilage; ligament; tendon; bone marrow; transplant; inflammation;
KW autoimmune disorder; vaccine adjuvant; antigen presenting cell; cancer;
KW HIV; human immunodeficiency virus; therapy; prevention.

OS Homo sapiens.
OS Synthetic.

PH Key Location/Qualifiers
FT Peptide 1..20
FT /label= signal
FT /note= "putative signal peptide"

FT Peptide 1..21
FT /label= signal
FT /note= "putative signal peptide"

FT Peptide 1..22
FT /label= signal
FT /note= "putative signal peptide"

FT Protein 21..328
FT /label= SDF-1alpha
FT /note= "Chemokine domain. Putative start of mature protein"

FT Protein 22..328
FT /label= SDF-1alpha
FT /note= "Chemokine domain. Putative start of mature protein"

FT Protein 23..328
FT /label= SDF-1alpha
FT /note= "Chemokine domain. Putative start of mature protein"

PN W09838212-A2.
PD 03-SEP-1998.
PF 27-FEB-1998; US-808720.
PR 28-FEB-1997; US-808720.
PA (GEM) GENETICS INST INC.
PI Herrmann SH, Swanberg SL;
DR WPI; 98-495387/42.
DR N-PSDB; V56822.

PT New chimeric polypeptide(s) - comprise chemokine polypeptide
PT covalently linked to heterologous polypeptide, used for, e.g.
PT chemotactic recruitment of migratory cells

PS Claim 13h: Page 43-44: 69pp; English.
CC This sequence represents a human chemokine SDF-1alpha domain, isolated
CC from cDNA clones SL-2 and SL-3. This sequence is used in the production
CC of a construct comprising an isolated polynucleotide encoding a chimeric
CC polypeptide which comprises at least 1 chemokine polypeptide covalently
CC attached to at least 1 heterologous polypeptide. By including a
CC heterologous protein in the construction, the chimeric polypeptides
CC will have longer and increased biological activity and can direct the
CC chemokine to a particular site. The chimeric polypeptides can also be
CC designed to inhibit or desensitize chemokine receptors. They can be used
CC to affect the chemotactic recruitment of migratory cells, e.g. for
CC stimulating or inhibiting angiogenesis, for regeneration of bone,
CC cartilage, ligament or tendon, for recruiting transplanted bone marrow
CC cells to bone marrow, or for treating or preventing inflammatory or
CC autoimmune disorders. They can also be used as vaccine adjuvants or to
CC enhance the activity of antigen presenting cells and for treating or
CC preventing HIV infection. Neutralising antibodies binding to the chimeric
CC polypeptide may also be useful therapeutics for both conditions

Query Match 100.0%; Score 102; DB 35; Length 328;
Best Local Similarity 100.0%; Pred. No. 2.78e-03;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 69 qvcidpklkwiq 80
| | | | | | | | | | | | | |
QY 1 QVCIDPKLKWIQ 12

RESULT 13 R06398 standard; Protein: 99 AA.

AC R06398; 1990 (first entry)
DE Human MCF precursor.
KW Monocyte chemotactic factor; antibacterial; antitumour; cancer.
OS Homo sapiens.
OS Key Location/Qualifiers
FT Protein 24..99
FT /label=mature MCF
FT /note="Claim 1"

FT misc_difference 76
FT /label=A or T
FT W09007863-A.
PD 26-JUL-1990.
PF 02-JAN-1990; U000004.
PR 01-JAN-1989; JP-000065.
PR 03-FEB-1989; JP-026438.
PA (USDC) US SEC OF COMMERCE.
PI Furutani Y, Fukui T, Junichi Y, Masaaki Y, Matsushima K;
PI Oppenheim J;
PI WPI; 90-253802/33.
DR P-PSDB; R06398.

DR Human monocyte chemotactic factor type polypeptide and DNA
PT encoding it - useful as antibacterial and antitumour agents.
PS Claim 2: Page 25; 27pp; English.
CC The sequence was deduced from the DNA sequence determined from
CC three recombinant plasmids, pMCF7, pMCF25 and pMCF29 which
CC were isolated from a cDNA library prep. from RNA extracted from
CC human promyelocytic leukaemia cell line, HL-60 (ATCC CCL-240).
CC vectors. In plasmids pMCF7 and pMCF29 bases 105 and 226 were
CC T and G resp; in pMCF25 they were C and A resp. The AA at posn.
CC 76 of the precursor protein is therefore not determined and may be
CC either Ala or Thr. The protein may be produced by recombinant
CC DNA techniques in E.coli, and is useful as a drug for treatment of
CC certain bacterial infections and cancers.

Query Match 74.5%; Score 76; DB 2; Length 99;
Best Local Similarity 58.3%; Pred. No. 1.42e+00;
Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 73 eicxdpklkwiq 84
| | | | | | | | | | | | | |
QY 1 QVCIDPKLKWIQ 12

RESULT 14 W13598 standard; peptide; 66 AA.

AC W13598;
DT 07-NOV-1997 (first entry)
DE Monocyte chemoattractant protein analogue MCP-1 (10-76).
KW Truncated monocyte chemoattractant protein-1; inhibitor;
KW receptor binding; anti inflammatory; basophil; lymphocyte; allergy;
KW chronic inflammatory disease; arthritis; arteriosclerosis;
KW lung disease.
OS Homo sapiens.
PN CA2152141-A.
PD 20-DEC-1996.

Sat, Feb 5 15:13:51 2000

US-09-150-813-40.rsp

 M P E R L E H

 (TM)

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MParch_pp protein - protein database search, using Smith-Waterman algorithm
 Run on: Fri Feb 4 17:09:44 2000; Maspar time 2.49 Seconds
 136.407 Million cell updates/sec
 Tabular output not generated.

Title: >US-09-150-813-40
 Description: (1-12) from US09150813.ppe
 Perfect Score: 99
 Sequence: 1 ELCLDPKENWVO 12
 Scoring table: PAM 150
 Gap 15
 Searched: 77977 seqs, 28258293 residues
 Post-processing: Minimum Match 0%
 Listing first 45 summaries
 Database: swiss-prot37
 1:swissprot
 Statistics: Mean 26.183; Variance 34.228; scale 0.765

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description	Pred. No.
1	99	100.0	99	1	IL8_HUMAN	5.80e-10
2	95	96.0	101	1	IL8_RABIT	5.72e-09
3	92	92.9	101	1	IL8_MACMU	3.12e-08
4	92	92.9	101	1	IL8_CERTO	3.12e-08
5	88	88.9	101	1	IL8_SHEEP	2.90e-07
6	88	88.9	101	1	IL8_CANFA	2.90e-07
7	88	88.9	101	1	IL8_PIG	2.90e-07
8	85	85.9	101	1	IL8_BOVIN	1.51e-06
9	85	85.9	101	1	IL8_CAVPO	1.51e-06
10	81	81.8	99	1	MCPL_BOVIN	1.31e-05
11	78	78.8	98	1	MCPL_HUMAN	6.44e-05
12	75	75.8	99	1	MCPL_HUMAN	3.08e-04
13	75	75.8	101	1	MCPL_CANFA	3.08e-04
14	74	74.7	92	1	MILA_RAT	5.17e-04
15	74	74.7	99	1	MCPL_PIG	5.17e-04
16	73	73.7	99	1	MCPL_BOVIN	8.63e-04
17	72	72.7	103	1	EMFL_CHICK	1.44e-03
18	71	71.7	97	1	EOTA_MOUSE	2.38e-03
19	71	71.7	97	1	EOTA_RAT	2.38e-03
20	71	71.7	104	1	MCPL_MOUSE	2.38e-03
21	70	70.7	97	1	MCPL_BOVIN	3.93e-03
22	70	70.7	74	1	EOTA_HUMAN	3.93e-03
23	70	70.7	148	1	MCPL_MOUSE	3.93e-03

ALIGNMENTS

RESULT	1	STANDARD;	PRT;	99 AA.
ID	IL8_HUMAN			
AC	P10145			
DT	01-MAR-1989 (REL. 10, CREATED)			
DT	01-MAR-1989 (REL. 10, LAST SEQUENCE UPDATE)			
DT	15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)			
DE	INTERLEUKIN-8 PRECURSOR (IL-8) (MONOCYTE-DERIVED NEUTROPHIL			
DE	CHEMOTACTIC FACTOR) (MDNCF) (T-CELL CHEMOTACTIC FACTOR) (NEUTROPHIL-			
DE	ACTIVATING PROTEIN 1) (NAP-1) (LYMPHOCYTE-DERIVED NEUTROPHIL-			
DE	ACTIVATING FACTOR) (LYNAP) (PROTEIN 3-10C) (NEUTROPHIL-ACTIVATING			
DE	FACTOR) (NAF) (GRANULOCYTE CHEMOTACTIC PROTEIN 1) (GCP-1) (EMOCTAKIN).			
GN	IL8			
OS	HOMO SAPIENS (HUMAN)			
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;			
OC	PRIMATES; CATARRHINI; HOMINIDAE; HOMO.			
[1]	SEQUENCE FROM N.A.			
RP	MEDLINE; 88258376.			
RA	MATSUSHIMA K., MORISHITA K., YOSHIMURA T., LAVU S., KOBAYASHI Y.,			
RA	LEW W., APPELLA E., KUNG H., LEONARD E.J., OPPENHEIM J.J.;			
RT	"Molecular cloning of a human monocyte-derived neutrophil chemotactic			
RT	factor (MDNCF) and the induction of MDNCF mRNA by interleukin 1 and			
RT	tumor necrosis factor";			
RL	J. EXP. MED. 167:1883-1893(1988).			
[2]	SEQUENCE FROM N.A.			
RP	MEDLINE; 87224164.			
RA	SCHMID J., WEISSMANN C.;			
RT	"Induction of mRNA for a serine protease and a			
RT	beta-thromboglobulin-like protein in mitogen-stimulated human			
RT	leukocytes";			
RL	J. IMMUNOL. 139:250-256(1987).			
[3]	SEQUENCE FROM N.A.			
RP	MEDLINE; 89313739.			
RA	KOWALSKI J., DENHARDT D.T.;			
RT	"Regulation of the mRNA for monocyte-derived neutrophil-activating			
RT	peptide in differentiating HL60 promyelocytes.";			
RL	MOL. CELL. BIOL. 9:1945-1957(1989).			
[4]	SEQUENCE FROM N.A.			
RP	MEDLINE; 89309826.			
RA	MUKAIDA N., SHIROO M., MATSUSHIMA K.;			
RT	"Genomic structure of the human monocyte-derived neutrophil			
RT	chemotactic factor IL-8";			
RL	J. IMMUNOL. 143:1366-1371(1989).			
[5]				

24	69	69.7	99	1	MCP2_HUMAN	MONOCYTE CHEMOTACTIC P	6.47e-03
25	69	69.7	125	1	MCP1_RABIT	MONOCYTE CHEMOTACTIC P	6.47e-03
26	68	68.7	99	1	MCP3_HUMAN	MONOCYTE CHEMOTACTIC P	1.05e-02
27	67	67.7	92	1	MILA_MOUSE	MACROPHAGE INFLAMMATOR	1.74e-02
28	67	67.7	99	1	MCP2_PIG	MONOCYTE CHEMOTACTIC P	1.74e-02
29	67	67.7	120	1	MCP1_CAVPO	MONOCYTE CHEMOTACTIC P	1.74e-02
30	66	66.7	89	1	SDF1_MOUSE	STROMAL CELL-DERIVED F	2.82e-02
31	66	66.7	92	1	MILB_HUMAN	MACROPHAGE INFLAMMATOR	2.82e-02
32	66	66.7	92	1	MILA_HUMAN	MACROPHAGE INFLAMMATOR	2.82e-02
33	66	66.7	93	1	MILB_HUMAN	MACROPHAGE INFLAMMATOR	2.82e-02
34	66	66.7	93	1	SDF1_HUMAN	STROMAL CELL-DERIVED F	2.82e-02
35	66	66.7	93	1	SDF1_FELCA	STROMAL CELL-DERIVED F	2.82e-02
36	65	65.7	96	1	EOTA_CAVPO	EOTAXIN PRECURSOR (EOS	4.58e-02
37	65	65.7	148	1	MCP1_RAT	MONOCYTE CHEMOTACTIC P	4.58e-02
38	63	63.6	90	1	MILB_CHICK	MACROPHAGE INFLAMMATOR	1.19e-01
39	63	63.6	92	1	MILB_RABIT	MACROPHAGE INFLAMMATOR	1.19e-01
40	63	63.6	485	1	1A12_LYCES	1-AMINOCYCLOPROPANE-1-	1.90e-01
41	62	62.6	89	1	MIP4_HUMAN	MACROPHAGE INFLAMMATOR	1.90e-01
42	60	60.6	194	1	UREF_HAEIN	UREASE ACCESSORY PROTE	4.80e-01
43	60	60.6	432	1	CBAA_ALCSP	3-CHLOROBENZONATE-3,4-D	4.80e-01
44	59	59.6	85	1	KOC2_ECOLI	TRANSCRIPTIONAL REPRS	7.57e-01
45	59	59.6	109	1	CCC3_HUMAN	CHEMOKINE CC-3 PRECURS	7.57e-01

RP SEQUENCE FROM N.A.
RA ISHIKAWA J.,
RL SUBMITTED (JAN-1993) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [6]
RP SEQUENCE OF 23-46.
RX MEDLINE; 89246368.
RA GOLDS E.E., MASON P., NVIRKOS P.;
RT "Inflammatory cytokines induce synthesis and secretion of gro protein
RT and a neutrophil chemotactic factor but not beta 2-microglobulin in
RT human synovial cells and fibroblasts.";
RL BIOCHEM. J. 259:585-588(1989).
RN [7]
RP SEQUENCE OF 23-54.
RX MEDLINE; 89279141.
RA SUZUKI K., MIYASAKA H., OTA H., YAMAKAWA Y., TAGAWA M., KURAMOTO A.,
RA MIZUNO S.;
RT "Purification and partial primary sequence of a chemotactic protein
RT for polymorphonuclear leukocytes derived from human lung giant cell
RT carcinoma LU65C cells.";
RL J. EXP. MED. 169:1895-1901(1989).
RN [8]
RP SEQUENCE OF 28-99.
RX MEDLINE; 88162914.
RA GREGORY H., YOUNG J., SCHROEDER J.M., MROWIETZ U., CHRISTOPHERS E.;
RT "Structure determination of a human lymphocyte derived neutrophil
RT activating peptide (LYNAP).";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 151:883-890(1988).
RN [9]
RP SEQUENCE OF 28-59.
RX MEDLINE; 88106502.
RA WALZ A., PEVERI P., ASCHAUER H., BAGGIOLINI M.;
RT "Purification and amino acid sequencing of NAF, a novel neutrophil-
RT activating factor produced by monocytes.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 149:755-761(1987).
RN [10]
RP SEQUENCE OF 28-69.
RX MEDLINE; 88097482.
RA YOSHIMURA T., MATSUSHIMA K., TANAKA S., ROBINSON E.A., APPELLA E.,
RA OPPENHEIM J.J., LEONARD E.J.;
RT "Purification of a human monocyte-derived neutrophil chemotactic
RT factor that has peptide sequence similarity to other host defense
RT cytokines.";
RL PROC. NATL. ACAD. SCI. U.S.A. 84:9233-9237(1987).
RN [11]
RP STRUCTURE BY NMR.
RX MEDLINE; 90234679.
RA CLORE G.M., APPELLA E., YAMADA M., MATSUSHIMA K., GRONENBORN A.M.;
RT "Three-dimensional structure of interleukin 8 in solution.";
RL BIOCHEMISTRY 29:1689-1696(1990).
RN [12]
RP STRUCTURE BY NMR OF COMPLEX TO RECEPTOR.
RA SKELTON N.J., QUAN C., REILLY D., LOWMAN H.;
RL SUBMITTED (DEC-1998) TO THE PDB DATA BANK.
RN [13]
RP X-RAY CRYSTALLOGRAPHY (1.6 ANGSTROMS).
RX MEDLINE; 90216714.
RA BALDWIN E.T., FRANKLIN K.A., APPELLA E., YAMADA M., MATSUSHIMA K.,
RA WLODAWER A., WEBER I.T.;
RT "Crystallization of human interleukin-8. A protein chemotactic for
RT neutrophils and T-lymphocytes.";
RL J. BIOL. CHEM. 265:6851-6853(1990).
RN [14]
RP X-RAY CRYSTALLOGRAPHY, AND STRUCTURE BY NMR.
RX MEDLINE; 91171286.
RA CLORE G.M., GRONENBORN A.M.;
RT "Comparison of the solution nuclear magnetic resonance and crystal
RT structures of interleukin-8. Possible implications for the mechanism
RT of receptor binding.";
RL J. MOL. BIOL. 217:611-620(1991).
RN [15]
RP X-RAY CRYSTALLOGRAPHY (1.6 ANGSTROMS), AND STRUCTURE BY NMR.
RX MEDLINE; 91110556.
RA BALDWIN E.T., WEBER I.T., ST CHARLES R., XUAN J.C., APPELLA E.,

RA YAMADA M., MATSUSHIMA K., EDWARDS B.F., CLORE G.M., GRONENBORN A.M.;
RT "Crystal structure of interleukin 8: symbiosis of NMR and
RT crystallography.";
RL PROC. NATL. ACAD. SCI. U.S.A. 88:502-506(1991).
RN [16]
RP N-TERMINAL FORMS.
RX MEDLINE; 91006326.
RA VAN DAMME J., RAMPART M., CONING R., DECOCK B., VAN OSSELAER N.,
RA WILLEMS J., BILLIAU A.;
RT "The neutrophil-activating proteins interleukin 8 and beta-
RT thromboglobulin: in vitro and in vivo comparison of NH2-terminally
RT processed forms.";
RL EUR. J. IMMUNOL. 20:2113-2118(1990).
RN [17]
RP N-TERMINAL FORMS.
RX MEDLINE; 89231715.
RA VAN DAMME J., VAN BERUMEN J., CONINGS R., DECOCK B., BILLIAU A.;
RT "Purification of granulocyte chemotactic peptide/interleukin-8
RT reveals N-terminal sequence heterogeneity similar to that of
RT beta-thromboglobulin.";
RL EUR. J. BIOCHEM. 181:337-344(1989).
RN [18]
RP SYNTHESIS OF 28-99.
RX MEDLINE; 91175767.
RA CLARK-LEWIS I., MOSE B., WALZ A., BAGGIOLINI M., SCOTT G.J.,
RA AEBERSOLD R.;
RT "Chemical synthesis, purification, and characterization of two
RT inflammatory proteins, neutrophil activating peptide 1
RT (interleukin-8) and neutrophil activating peptide.";
RL BIOCHEMISTRY 30:3128-3135(1991).
RN [19]
RP REVIEW.
RX MEDLINE; 92347562.
RA BAGGIOLINI M., CLARK-LEWIS I.;
RT "Interleukin-8, a chemotactic and inflammatory cytokine.";
RL FES LETT. 307:97-101(1992).
CC -!- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,
CC BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
CC NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
CC RESPONSE TO AN INFLAMMATORY STIMULUS.
CC -!- SUBUNIT: HOMODIMER.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CX-C).
CC -----
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CC -----
DR EMBL; Y00787; G34519; -
DR EMBL; M17017; G179580; -
DR EMBL; M26383; G188628; -
DR EMBL; M28130; G186368; -
DR EMBL; D14283; G219916; -
DR PIR; A37034; A37034.
DR PIR; S03975; S03975.
DR PIR; S04216; S04216.
DR PDB; 1IL8; 15-JAN-91.
DR PDB; 2IL8; 15-OCT-92.
DR PDB; 3IL8; 15-OCT-92.
DR PDB; 1ICW; 12-MAR-97.
DR PDB; 1IKL; 15-OCT-95.
DR PDB; 1IKM; 15-OCT-95.
DR PDB; 1ILP; 23-DEC-98.
DR PDB; 1ILO; 23-DEC-98.
DR MIM; 146930; -
DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
DR PFAM; PF00048; 118; 1.
KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL; 3D-STRUCTURE.
FT SIGNAL 1 22

Sat Feb 5 15:13:51 2000

FT CHAIN 23 99 INTERLEUKIN-8.
 FT PROPEP 23 30 ONE OR MORE OF THESE RESIDUES ARE MISSING
 IN SOME MATURE FORMS OF IL-8.
 FT DISULFID 34 61
 FT DISULFID 36 77
 FT CONFLICT 53 53 R -> L (IN REF. 7).
 FT HELIX 46 48
 FT STRAND 49 55

***Note: remainder of annotations omitted.

Query Match 100.08; Score 99; DB 1; Length 99;
 Best Local Similarity 100.08; Pred. No. 5.80e-10;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 75 ELCLDPKKNWQ 86
 QY 1 ELCLDPKKNWQ 12

RESULT 2
 ID IL8 RABIT STANDARD; PRT; 101 AA.
 AC P19874;
 DT 01-FEB-1991 (REL. 17, CREATED)
 DT 01-DEC-1992 (REL. 24, LAST SEQUENCE UPDATE)
 DT 01-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)
 DE INTERLEUKIN-8 PRECURSOR (IL-8) (NEUTROPHIL ATTRACTANT/ACTIVATION
 DE PROTEIN-1) (NAP-1) (PERMEABILITY FACTOR 1) (RPF1).
 GN IL8.

OS ORCTOLAGUS CUNICULUS (RABBIT).
 OC EURKYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC LAGOMORPHA; LEPORIDAE; ORCTOLAGUS.
 RN [1]

RP SEQUENCE FROM N.A.
 RC STRAIN-NEW ZEALAND WHITE; TISSUE-SPLEEN;
 RX MEDLINE: 91225489.
 RA YOSHIMURA T., YUKHI N.;
 RT "Neutrophil attractant/activation protein-1 and monocyte
 RT chemoattractant protein-1 in rabbit. cDNA cloning and their
 RT expression in spleen cells.";
 RL J. IMMUNOL. 146:3483-3488(1991).

RN [2]
 RP SEQUENCE OF 23-53.
 RC STRAIN-NEW ZEALAND WHITE; TISSUE-PERITONEAL CAVITY;
 RX MEDLINE: 91058518.
 RA BEAUBIEN B.C., COLLINS P.D., JOSE P.J., TOTTY N.F., HSUAN J.,
 RA WATERFIELD M.D., WILLIAMS T.J.;
 RT "A novel neutrophil chemoattractant generated during an inflammatory
 RT reaction in the rabbit peritoneal cavity in vivo. Purification,
 RT partial amino acid sequence and structural relationship to
 RT interleukin 8.";
 RL BIOCHEM. J. 271:797-801(1990).

CC -!- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,
 CC BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
 CC NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
 CC RESPONSE TO AN INFLAMMATORY STIMULUS.
 CC -!- SUBUNIT: HOMODIMER.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).

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CC EMBL: M57439; G165553;
 CC PIR: S13052; S13052.
 CC PROSITE: PS00471; SMALL_CYTOKINES_CXC; 1.
 CC PFAM: PF00048; 118; 1.
 CC HSSP: P10145; 11KL.

KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 FT SIGNAL 1 22
 FT CHAIN 23 101 INTERLEUKIN-8.
 FT DISULFID 34 61 BY SIMILARITY.
 FT DISULFID 36 77 BY SIMILARITY.
 FT CONFLICT 50 50 K -> I (IN REF. 2).
 SQ SEQUENCE 101 AA; 11402 MW; CB32CC30 CRC32;

Query Match 96.06; Score 95; DB 1; Length 101;
 Best Local Similarity 91.72; Pred. No. 5.72e-09;
 Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 75 ELCLDPKKNWQ 86
 QY 1 ELCLDPKKNWQ 12

RESULT 3
 ID IL8 MACMU STANDARD; PRT; 101 AA.
 AC P51495;
 DT 01-OCT-1996 (REL. 34, CREATED)
 DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
 DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
 DE INTERLEUKIN-8 PRECURSOR (IL-8).
 GN IL8.

OS MACACA MULATTA (RHESUS MACAQUE), AND
 OS MACACA NEMESTRINA (PIG-TAILED MACAQUE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC PRIMATES; CATARRHINI; CERCOPITHECIDAE; CERCOPITHECINAE; MACACA.
 OC [1]

RN SEQUENCE FROM N.A.
 RP TISSUE-BLOOD;
 RX MEDLINE: 96003435.
 RA VILLINGER F.J., BRAR S.S., MAYNE A.E., CHIKKALA N., ANSARI A.A.;
 RT "Comparative sequence analysis of cytokine genes from human and
 RT nonhuman primates.";
 RL J. IMMUNOL. 155:3946-3954(1995).

RN [2]
 RP SEQUENCE FROM N.A.
 RC SPECIES-M. MULATTA; TISSUE-BLOOD;
 RX MEDLINE: 95355132.
 RA MINNERLY J.C., BAGANOFF M.P., DEPPERER C.L., KELLER B.T.,
 RA RAPP S.R., WIDOMSKI D.L., FRETLAND D.J., BOLANOWSKI M.A.;

RT "Identification and characterization of rhesus macaque
 RT interleukin-8.";
 RL INTERLEUKIN-8; 313-331(1995).

CC -!- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,
 CC BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
 CC NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
 CC RESPONSE TO AN INFLAMMATORY STIMULUS (BY SIMILARITY).
 CC -!- SUBUNIT: HOMODIMER (BY SIMILARITY).
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).

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CC EMBL: U19849; G644816;
 CC EMBL: U19851; G644820;
 CC EMBL: S78555; G1042228;
 CC PROSITE: PS00471; SMALL_CYTOKINES_CXC; 1.
 CC PFAM: PF00048; 118; 1.
 CC HSSP: P10145; 11IL8.

CC CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 KW SIGNAL 1 22
 FT CHAIN 23 101 BY SIMILARITY.
 FT DISULFID 34 61 BY SIMILARITY.
 FT DISULFID 36 77 BY SIMILARITY.

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SQ SEQUENCE 101 AA; 11320 MW; 77D78AA0 CRC32;

Query Match 92.9%; Score 92; DB 1; Length 101;
Best Local Similarity 91.7%; Pred. No. 3.12e-08;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 75 ELCLDPKEPWQ 86
    ||||| |||
QY 1 ELCLDPKRNWQ 12

RESULT 4
ID IL8_CERTO STANDARD; PRT; 101 AA.
AC P46653;
DT 01-NOV-1995 (REL. 32, CREATED)
DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
DE INTERLEUKIN-8 PRECURSOR (IL-8).
GN IL8.
OS CERCOCEBUS TORQUATUS ATYS (RED-CROWNED MANGABEY). (SOOTY MANGABEY).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC PRIMATES; CATARRHINI; CERCOPITHECIDAE; CERCOPITHECINAE; CERCOCERUS.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-BLOOD;
RX MEDLINE; 96003435.
RA VILLINGER F.J., BRAR S.S., MAYNE A.E., CHIKKALA N., ANSARI A.A.;
RT "Comparative sequence analysis of cytokine genes from human and
    nonhuman primates";
RL J. IMMUNOL. 155:3946-3954(1995).
CC -!- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,
CC BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
CC NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
CC RESPONSE TO AN INFLAMMATORY STIMULUS (BY SIMILARITY).
CC -!- SUBUNIT: HOMODIMER (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CXCL).
CC
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CC
CC EMBL; U19839; G644796; -
CC DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
CC DR PFAM; PF00048; IL8; 1.
CC DR HSP; P10145; IL18.
CC KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
CC FT SIGNAL 1 22 BY SIMILARITY.
CC FT CHAIN 23 101 INTERLEUKIN-8.
CC FT DISULFID 34 61 BY SIMILARITY.
CC FT DISULFID 36 77 BY SIMILARITY.
CC SQ SEQUENCE 101 AA; 11309 MW; 47F1BF00 CRC32;

Query Match 92.9%; Score 92; DB 1; Length 101;
Best Local Similarity 91.7%; Pred. No. 3.12e-08;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 75 ELCLDPKEPWQ 86
    ||||| |||
QY 1 ELCLDPKRNWQ 12

RESULT 5
ID IL8_SHEEP STANDARD; PRT; 101 AA.
AC P36925;
DT 01-JUN-1994 (REL. 29, CREATED)
DT 01-JUN-1994 (REL. 29, LAST SEQUENCE UPDATE)
DT 01-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)
DE INTERLEUKIN-8 PRECURSOR (IL-8).

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GN IL8.
OS OVIS ARIES (SHEEP).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC ARTIODACTYLIA; RUMINANTIA; PECORA; BOVIDAE; CAPRINAE; OVIS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 95121931.
RA LEGASTELOIS I., GREENLAND T., ARNAUD P., MORNEX J.F., CORDIER G.;
RT "Sequencing of the ovine interleukin-8-encoding cDNA using the
    polymerase chain reaction.";
RL GENE 150:367-369(1994).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE; 95137691.
RA SEOW H.F., YOSHIMURA T., WOOD P.R., COLDITZ I.G.;
RT "Cloning, sequencing, expression and inflammatory activity in skin of
    ovine interleukin-8.";
RL IMMUNOL. CELL BIOL. 72:398-405(1994).
CC -!- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,
CC BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
CC NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
CC RESPONSE TO AN INFLAMMATORY STIMULUS.
CC -!- SUBUNIT: HOMODIMER.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CXCL).
CC
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CC
CC EMBL; X78306; G463254; -
CC DR EMBL; S74436; G786591; -
CC DR FIR; S42496; S42496.
CC DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
CC DR PFAM; PF00048; IL8; 1.
CC DR HSP; P10145; IL18.
CC KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
CC FT SIGNAL 1 22 BY SIMILARITY.
CC FT CHAIN 23 101 INTERLEUKIN-8.
CC FT DISULFID 34 61 BY SIMILARITY.
CC FT DISULFID 36 77 BY SIMILARITY.
CC SQ SEQUENCE 101 AA; 11292 MW; 5A574527 CRC32;

Query Match 88.9%; Score 88; DB 1; Length 101;
Best Local Similarity 83.3%; Pred. No. 2.90e-07;
Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 75 EVCLDPKEKWQ 86
    |:|||||:|
QY 1 ELCLDPKRNWQ 12

RESULT 6
ID IL8_CANFA STANDARD; PRT; 101 AA.
AC P41324;
DT 01-FEB-1995 (REL. 31, CREATED)
DT 01-FEB-1995 (REL. 31, LAST SEQUENCE UPDATE)
DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
DE INTERLEUKIN-8 PRECURSOR (IL-8).
GN IL8.
OS CANIS FAMILIARIS (DOG).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC CARNIVORA; FISSIPEDIA; CANIDAE; CANIS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 94010328.
RA ISHIKAWA J., SUZUKI S., HOTTA K., HIROTA Y., MIZUNO S., SUZUKI K.;
RT "Cloning of a canine gene homologous to the human
    interleukin-8-encoding gene.";

```

RL GENE 131:305-306(1993).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC TISSUE=LYMPH NODE;
 RX MEDLINE: 95127913.
 RA MATSUMOTO Y., MOHAMED A., ONODERA T., KATO H., OHASHI T.,
 RA GOITSUKA R., TSUJIMOTO H., HASEGAWA A., FURUSAWA S., YOSHIHARA K.,
 RA ISHIKAWA J., HOTTA K., SUZUKI K., HIROTA Y.,
 RT "Molecular cloning and expression of canine interleukin 8 cDNA."
 RL CYTOKINE 6:455-461(1994).
 RN [3]
 RP SEQUENCE FROM N.A.
 RC STRAIN=KONGREI; TISSUE=JUGULAR VEIN;
 RX MEDLINE: 95114148.
 RA KUKIELKA G.L., SMITH W.C., LAROSA G.J., MANNING A.M.,
 RA MENDOZA L.H., DALY T.J., HUGHES B.J., YOKER K.A., HAWKINS H.K.,
 RA MICHAEL L.H., ROT A., ENTMAN M.L.;
 RT "Interleukin-8 gene induction in the myocardium after ischemia and
 RT reperfusion in vivo."
 RL J. CLIN. INVEST. 95:89-103(1994).
 RN [4]
 RP SEQUENCE FROM N.A.
 RC STRAIN=BEAGLE;
 RX MEDLINE: 97230298.
 RA STRAUBINGER R.K., STRAUBINGER A.F., HARTER L., JACOBSON R.H.,
 RA CHANG Y.-F., SUMMERS B.A., ERB H.N., APPEL M.J.;
 RT "Borrelia burgdorferi migrates into joint capsules and causes an up-
 RT regulation of interleukin-8 in synovial membranes of dogs
 RT experimentally infected with ticks."
 RL INFECT. IMMUN. 65:1273-1285(1997).
 CC -1- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,
 CC BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
 CC NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
 CC RESPONSE TO AN INFLAMMATORY STIMULUS.
 CC -1- SUBUNIT: HOMODIMER.
 CC -1- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).
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 CC -----
 CC EMBL; D28772; G517100; -
 DR EMBL; D14285; G475152; -
 DR EMBL; U10308; G607814; -
 DR EMBL; AF048717; G2935472; -
 DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSPF; P10145; i1KL; 1.
 DR HSPF; P10145; i1KL; 1.
 KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 FT SIGNAL 1 22
 FT CHAIN 23 101
 FT INTERLEUKIN-8.
 FT DISULFID 34 61
 FT BY SIMILARITY.
 FT DISULFID 36 77
 FT BY SIMILARITY.
 SQ SEQUENCE 101 AA; 11280 MW; 7C49D62D CRC32;

 Query Match 88.9%; Score 88; DB 1; Length 101;
 Best Local Similarity 83.3%; Pred. No. 2.90e-07;
 Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

 Db 75 EVCLDPKKEKVVQ 86
 QY 1 ELCLDPKENVVQ 12

 RESULT 7
 ID IL8_PIG STANDARD; PRT; 103 AA.
 AC P26894; P22951;
 DT 01-AUG-1991 (REL. 19, CREATED)

DT 01-AUG-1992 (REL. 23, LAST SEQUENCE UPDATE)
 DE 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
 DE INTERLEUKIN-8 PRECURSOR (IL-8) (ALVEOLAR MACROPHAGE CHEMOTACTIC FACTOR
 DE 1) (AMCF-I).
 GN IL8.
 OS SUS SCROFA (PIG).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC ARTIODACTYLA; SUIFORMES; SUINA; SUIDAE; SUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 94103307.
 RA LIN G., PEARSON A.E., SCAMURRA R.W., ZHOU Y., BAARSCH M.J.,
 RA WEISS D.J., MURTAUGH M.P.;
 RT "Regulation of interleukin-8 expression in porcine alveolar
 RT macrophages by bacterial lipopolysaccharide."
 RL J. BIOL. CHEM. 269:77-85(1994).
 RN [2]
 RP SEQUENCE FROM N.A.
 RA SANJANWALA M.;
 RL SUBMITTED (JUL-1991) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [3]
 RP SEQUENCE FROM N.A., AND SEQUENCE OF 26-45.
 RC TISSUE=LUNG;
 RX MEDLINE: 93041741.
 RA GOODMAN R.B., FOSTER D.C., MATHEWS S.L., OSBORN S.G., KULJPER J.L.,
 RA FORSTROM J.W., MARTIN T.R.;
 RT "Molecular cloning of porcine alveolar macrophage-derived neutrophil
 RT chemotactic factors I and II; identification of porcine IL-8 and
 RT another intercrine-alpha protein."
 RL BIOCHEMISTRY 31:10483-10490(1992).
 RN [4]
 RP REVISION TO 23.
 RA GOODMAN R.B.;
 RL SUBMITTED (MAR-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [5]
 RP SEQUENCE OF 26-45.
 RC STRAIN=YORKSHIRE;
 RX MEDLINE: 91217086.
 RA GOODMAN R.B., FORSTROM J.W., OSBORN S.G., CHI E.Y., MARTIN T.R.;
 RT "Identification of two neutrophil chemotactic peptides produced by
 RT porcine alveolar macrophages."
 RL J. BIOL. CHEM. 266:8455-8463(1991).
 CC -1- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,
 CC BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
 CC NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
 CC RESPONSE TO AN INFLAMMATORY STIMULUS.
 CC -1- SUBUNIT: HOMODIMER.
 CC -1- TISSUE SPECIFICITY: ALVEOLAR MACROPHAGES.
 CC -1- INDUCTION: BY LIPOPOLYSACCHARIDE.
 CC -1- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).
 CC -----
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 CC -----
 CC EMBL; M86923; G164521; -
 DR EMBL; X61151; G516197; -
 DR EMBL; M93367; G1235612; -
 DR PIR; A44253; A44253.
 DR PIR; A39819; A39819.
 DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSPF; P10145; i1KL; 1.
 KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 FT SIGNAL 1 25
 FT CHAIN 26 103
 FT INTERLEUKIN-8.
 FT DISULFID 34 61
 FT BY SIMILARITY.
 FT DISULFID 36 77
 FT BY SIMILARITY.

FT CONFLICT 33 34 RC -> CR (IN REF. 5).
 FT CONFLICT 87 K -> KK (IN REF. 2).
 SQ SEQUENCE 103 AA: 11633 MW; A012D59D CRC32;

 Query Match 88.9%; Score 80; DB 1; Length 103;
 Best Local Similarity 83.3%; Pred. No. 2.90e-07;
 Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

 Db 75 EYCLDPKRWQ 86
 1:|||||:||||
 QY 1 ELCLDPKRWQ 12

 RESULT 8
 ID IL8_BOVIN STANDARD; PRT; 101 AA.
 AC P79255;
 DT 01-NOV-1997 (REL. 35, CREATED)
 DT 01-NOV-1997 (REL. 35, LAST SEQUENCE UPDATE)
 DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
 DE INTERLEUKIN-8 PRECURSOR (IL-8).
 GN IL8.
 OS BOS TAURUS (BOVINE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC ARTIODACTYLA; RUMINANTIA; PECORA; BOVIDAE; BOVINAE; BOS.
 RP [1]
 RX MEDLINE; 96304552.
 RA MORSEY M.A., POPOWYCH Y., KOWALSKI J., GERLACH G., GODSON D.,
 RA CAMPOS M., BABIUK L.A.;
 RT "Molecular cloning and expression of bovine interleukin-8";
 RL MICROB. PATHOG. 20:203-212(1996).
 CC
 CC -!- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,
 CC BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
 CC NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
 CC RESPONSE TO AN INFLAMMATORY STIMULUS (BY SIMILARITY).
 CC -!- SUBUNIT: HOMODIMER (BY SIMILARITY).
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).
 CC
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 CC or send an email to license@isb-sib.ch).
 CC
 DR EMBL; L04986; G459765; -
 DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSSP; P10145; i18L.
 KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 FT SIGNAL 1 22 BY SIMILARITY.
 FT CHAIN 23 101 INTERLEUKIN-8.
 FT DISULFID 34 61 BY SIMILARITY.
 FT DISULFID 36 77 BY SIMILARITY.
 SQ SEQUENCE 101 AA; 11291 MW; 0B39C526 CRC32;

 Query Match 85.9%; Score 85; DB 1; Length 101;
 Best Local Similarity 75.0%; Pred. No. 1.51e-06;
 Matches 9; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

 Db 75 EYCLDPKRWQ 86
 1:|||||:||||
 QY 1 ELCLDPKRWQ 12

 RESULT 9
 ID IL8_CAVPO STANDARD; PRT; 101 AA.
 AC P49113;
 DT 01-FEB-1996 (REL. 33, CREATED)
 DT 01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)
 DT 01-FEB-1996 (REL. 33, LAST ANNOTATION UPDATE)
 DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
 DE INTERLEUKIN-8 PRECURSOR (IL-8) (NEUTROPHIL ATTRACTANT PROTEIN 1)
 GN IL8.
 OS CAVIA PORCELLUS (GUINEA PIG).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC RODENTIA; HYSTRICOGNATHI; CAVIIDAE; CAVIA.
 RP [1]
 RX MEDLINE; 94065176.
 RA YOSHIMURA T., JOHNSON D.G.;
 RT "cDNA cloning and expression of guinea pig neutrophil attractant
 RT protein-1 (NAP-1). NAP-1 is highly conserved in guinea pig.";
 RL J. IMMUNOL. 151:6225-6236(1993).
 CC
 CC -!- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,
 CC BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
 CC NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
 CC RESPONSE TO AN INFLAMMATORY STIMULUS (BY SIMILARITY).
 CC -!- SUBUNIT: HOMODIMER (BY SIMILARITY).
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).
 CC
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 CC or send an email to license@isb-sib.ch).
 CC
 DR EMBL; L04986; G459765; -
 DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSSP; P10145; i18L.
 KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 FT SIGNAL 1 22 BY SIMILARITY.
 FT CHAIN 23 101 INTERLEUKIN-8.
 FT DISULFID 34 61 BY SIMILARITY.
 FT DISULFID 36 77 BY SIMILARITY.
 SQ SEQUENCE 101 AA; 11414 MW; E13FB521 CRC32;

 Query Match 85.9%; Score 85; DB 1; Length 101;
 Best Local Similarity 75.0%; Pred. No. 1.51e-06;
 Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

 Db 75 QCLDPKRWQ 86
 :|||||:||||
 QY 1 ELCLDPKRWQ 12

 RESULT 10
 ID MCPA_BOVIN STANDARD; PRT; 99 AA.
 AC P28291;
 DT 01-DEC-1992 (REL. 24, CREATED)
 DT 01-DEC-1992 (REL. 24, LAST SEQUENCE UPDATE)
 DT 01-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)
 DE MONOCYTE CHEMOTACTIC PROTEIN 1A PRECURSOR (MCP-1A) (ACIDIC
 DE SEMINAL FLUID PROTEIN).
 OS BOS TAURUS (BOVINE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC ARTIODACTYLA; RUMINANTIA; PECORA; BOVIDAE; BOVINAE; BOS.
 RP [1]
 RX MEDLINE; 92096117.
 RA WEMPE F., HENSCHEN A., SCHEIT K.H.;
 RT "Gene expression and cDNA cloning identified a major basic protein
 RT constituent of bovine seminal plasma as bovine
 RT monocyte-chemoattractant protein-1 (MCP-1).";
 RL DNA CELL BIOL. 10:671-679(1991).
 RN [2]
 RC SEQUENCE FROM N.A.
 RC TISSUE-SEMINAL PLASMA;
 RX MEDLINE; 92096117.
 RA WEMPE F., HENSCHEN A., SCHEIT K.H.;
 RT "Gene expression and cDNA cloning identified a major basic protein
 RT constituent of bovine seminal plasma as bovine
 RT monocyte-chemoattractant protein-1 (MCP-1).";
 RL DNA CELL BIOL. 10:671-679(1991).
 RN [2]
 RC SEQUENCE FROM N.A.
 RC TISSUE-SEMINAL PLASMA;
 RX MEDLINE; 92096117.
 RA WEMPE F., HENSCHEN A., SCHEIT K.H.;
 RT "Gene expression and cDNA cloning identified a major basic protein
 RT constituent of bovine seminal plasma as bovine
 RT monocyte-chemoattractant protein-1 (MCP-1).";
 RL DNA CELL BIOL. 10:671-679(1991).
 RN [2]
 RC SEQUENCE FROM N.A.
 RC TISSUE-SEMINAL PLASMA;
 RX MEDLINE; 92096117.
 RA WEMPE F., HENSCHEN A., SCHEIT K.H.;
 RT "Gene expression and cDNA cloning identified a major basic protein
 RT constituent of bovine seminal plasma as bovine
 RT monocyte-chemoattractant protein-1 (MCP-1).";
 RL DNA CELL BIOL. 10:671-679(1991).
 RN [2]
 RC SEQUENCE FROM N.A.
 RC TISSUE-SEMINAL PLASMA;
 RX MEDLINE; 92096117.
 RA WEMPE F., HENSCHEN A., SCHEIT K.H.;
 RT "Gene expression and cDNA cloning identified a major basic protein
 RT constituent of bovine seminal plasma as bovine
 RT monocyte-chemoattractant protein-1 (MCP-1).";
 RL DNA CELL BIOL. 10:671-679(1991).
 RN [2]
 RC SEQUENCE FROM N.A.
 RC TISSUE-SEMINAL PLASMA;
 RX MEDLINE; 92096117.
 RA WEMPE F., HENSCHEN A., SCHEIT K.H.;
 RT "Gene expression and cDNA cloning identified a major basic protein
 RT constituent of bovine seminal plasma as bovine
 RT monocyte-chemoattractant protein-1 (MCP-1).";
 RL DNA CELL BIOL. 10:671-679(1991).
 RN [2]
 RC SEQUENCE FROM N.A.
 RC TISSUE-SEMINAL PLASMA;
 RX MEDLINE; 92096117.
 RA WEMPE F., HENSCHEN A., SCHEIT K.H.;
 RT "Gene expression and cDNA cloning identified a major basic protein
 RT constituent of bovine seminal plasma as bovine
 RT monocyte-chemoattractant protein-1 (MCP-1).";
 RL DNA CELL BIOL. 10:671-679(1991).
 RN [2]
 RC SEQUENCE FROM N.A.
 RC TISSUE-SEMINAL PLASMA;
 RX MEDLINE; 92096117.
 RA WEMPE F., HENSCHEN A., SCHEIT K.H.;
 RT "Gene expression and cDNA cloning identified a major basic protein
 RT constituent of bovine seminal plasma as bovine
 RT monocyte-chemoattractant protein-1 (MCP-1).";
 RL DNA CELL BIOL. 10:671-679(1991).
 RN [2]
 RC SEQUENCE FROM N.A.
 RC TISSUE-SEMINAL PLASMA;
 RX MEDLINE; 92096117.
 RA WEMPE F., HENSCHEN A., SCHEIT K.H.;
 RT "Gene expression and cDNA cloning identified a major basic protein
 RT constituent of bovine seminal plasma as bovine
 RT monocyte-chemoattractant protein-1 (MCP-1).";
 RL DNA CELL BIOL.

[2] SEQUENCE FROM N.A., AND SEQUENCE OF 17-98.
RP TISSUE=FETAL;
RC UGECIONE; 96235049.
RX UGUCCIONI M., LÖTSCHER P., FORSMANN U., DEWALD B., LI H., LIMA S.H.,
RA MEDICINE; 96235049.
RZ UGUCCIONI M., GAROTTA G., THELEN M., BAGGIOLINI M.,
LI Y., KREIDER B., GAROTTA G., THELEN M., BAGGIOLINI M.,
RT "Monocyte chemotactic protein 4 (MCP-4), a novel structural and
functional analogue of MCP-3 and eotaxin";
RZ EXP. MED. 183:2379-2384(1996).
[3]
RP SEQUENCE FROM N.A., AND SEQUENCE OF 22-33.
RC TISSUE=FETAL;
RC TISSUE=97341179.
RX BERKHOUT T.A., SARAU H.M., MOORES K., WHITE J.R., ELISHOURBAGY N.,
RA APPELBAUM E., REAPE T.J., BARNER M., MAKWANA J., FOLEY J.J.,
RA SCHMIDT D.B., IMBURGIA C., MACMULRY D., MATTHEWS J., O'DONNELL K.,
RA O'SHANNESY D., SCOTT M., GROOF P.H.E., MACPHEE C.;
RZ "Cloning, in vitro expression, and functional characterization of a
novel human CC chemokine of the monocyte chemotactic protein (MCP)
family (MCP-4) that binds and signals through the CC chemokine
receptor 2B";
RZ J. BIOL. CHEM. 272:16404-16413(1997).
[4]
RP SEQUENCE FROM N.A.
RA DANTE M., GIBSON A.;
RZ SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
[5]
RP SEQUENCE FROM N.A.
RC TISSUE=LUNG;
RA POWER C.A., MEYER A., RISON S.C.G., GUYE-COULIN F., WELLS T.N.C.;
RZ SUBMITTED (DEC-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, LYMPHOCYTES,
BASOPHILS AND EOSINOPHILS, BUT NOT NEUTROPHILS. SIGNALS THROUGH
CCR2B AND CCR3 RECEPTORS. PLAYS A ROLE IN THE ACCUMULATION OF
LEUKOCYTES AT BOTH SIDES OF ALLERGIC AND NONALLERGIC INFLAMMATION.
MAY BE INVOLVED IN THE RECRUITMENT OF MONOCYTES INTO THE ARTERIAL
WALL DURING THE DISEASE PROCESS OF ARTEROSCLEROSIS. MAY PLAY A
ROLE IN THE MONOCYTE ATTRACTION IN TISSUES CHRONICALLY EXPOSED TO
EXOGENOUS PATHOGENS.
CC -!- MASS SPECTROMETRY: MW-9314; MW_ERR-30; METHOD=MALDI; RANGE=17-98.
CC -!- MASS SPECTROMETRY: MW-8760; MW_ERR-30; METHOD=MALDI; RANGE=22-98.
CC -!- MASS SPECTROMETRY: MW-8575; MW_ERR-30; METHOD=MALDI; RANGE=24-98.
CC -!- INDUCTION: BY INTERLEUKIN-1 AND TNF-ALPHA.
CC -!- TISSUE SPECIFICITY: WIDELY EXPRESSED. FOUND IN SMALL INTESTINE,
THYMUS, COLON, LUNG, TRACHEA, STOMACH AND LYMPH NODE. LOW LEVELS
SEEN IN THE PULMONARY ARTERY SMOOTH MUSCLE CELLS.
CC -!- THIS PROTEIN CAN BIND HEPARIN.
CC -!- PTM: ONE MAJOR ISOFORM MCP-4, AND TWO MINOR ISOFORMS (LA)MCP-4 AND
(FN)QGLA)MCP-4 ARE PRODUCED BY DIFFERENTIAL SIGNAL CLEAVAGE.
(LA)MCP-4 IS ABOUT 30 FOLD LESS ACTIVE THAN MCP-4.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
C-C) (CHEMOKINE CC).

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or send an email to license@isb-sib.ch).

EMBL; U46767; G1732123; -;
DR EMBL; AC002482; G2340091; -;
DR EMBL; X98306; E248571; -;
DR MIN; 601391; -;
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; il8; 1.
DR HSP; P13500; IDOL.
KW CYTOKINE; CHEMOTAXIS; SIGNAL; GLYCOPROTEIN; INFLAMMATORY RESPONSE.
FT SIGNAL 1 23
FT CHAIN 24 98 MONOCYTE CHEMOTACTIC PROTEIN 4.
FT MOD_RES 24 24 PYROLIDONE CARBOXYLIC ACID.
FT DISULFID 34 58 BY SIMILARITY.

FT DISULFID 35 74 BY SIMILARITY.
 FT CARBOHYD 29 29 POTENTIAL.
 SQ SEQUENCE 98 AA; 10986 MW; DF52F6EC CRC32;
 Query Match 78.8%; Score 78; DB 1; Length 98;
 Best Local Similarity 75.0%; Pred. No. 6.44e-05;
 Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
 Db 72 EICADPKKVVQ 83
 I: I I I I I I I I
 QY 1 ELCLDPKKNVVQ 12
 RESULT 12
 ID MCP1_HUMAN STANDARD; PRT; 99 AA.
 AC P13500;
 DT 01-JAN-1990 (REL. 13, CREATED)
 DT 01-JAN-1990 (REL. 13, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1) (MONOCYTE CHEMOTACTIC
 DE AND ACTIVATING FACTOR) (MCAF) (MONOCYTE SECRETORY PROTEIN JE)
 DE (MONOCYTE CHEMOATTRACTANT PROTEIN 1) (HC11) (SMALL INDUCIBLE CYTOKINE
 DE A2).
 GN SCYA2 OR MCP1.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 89165862.
 RA FURUTANI Y., NOMURA H., NOTAKE M., OYAMADA Y., FUKUI T., YAMADA M.,
 RA LARSEN C.G., OPPENHEIM J.J., MATSUSHIMA K.;
 RT "Cloning and sequencing of the cDNA for human monocyte chemotactic
 RT and activating factor (MCAF).";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 159:249-255(1989).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 90097880.
 RA ROLLINS B.J., STIER P., ERNST T., WONG G.G.;
 RT "The human homolog of the JE gene encodes a monocyte secretory
 RT protein.";
 RL MOL. CELL. BIOL. 9:4687-4695(1989).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 89153605.
 RA YOSHIMURA T., YUHKI N., MOORE S.K., APPELLA E., LERMAN M.I.,
 RA LEONARD E.J.;
 RT "Human monocyte chemoattractant protein-1 (MCP-1). Full-length cDNA
 RT cloning, expression in mitogen-stimulated blood mononuclear
 RT leukocytes, and sequence similarity to mouse competence gene JE.";
 RL FEBS LETT. 244:487-493(1989).
 RN [4]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 90290466.
 RA SHI Y.J., LI Y.S., KOLATTUKUDY P.E.;
 RT "Structure of human monocyte chemotactic protein gene and its
 RT regulation by TPA.";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 169:346-351(1990).
 RN [5]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 91207938.
 RA CHANG H.C., HSU F., FREEMAN G.J., GRIFFIN J.D., REINHARTZ E.L.;
 RT "Cloning and expression of a gamma-interferon-inducible gene in
 RT monocytes: a new member of a cytokine gene family.";
 RL INT. IMMUNOL. 1:388-399(1989).
 RN [6]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 94150476.
 RA LI Y.S., SHI Y.J., WRIGHT J.G., VALENTE A.J., CORNHILL J.F.,
 RA KOLATTUKUDY P.E.;
 RT "The expression of monocyte chemotactic protein (MCP-1) in human
 RT vascular endothelium in vitro and in vivo.";
 RL MOL. CELL. BIOL. 12:61-68(1993).

RN [7]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 92095166.
 RA YOSHIMURA T., LEONARD E.J.;
 RT "Human monocyte chemoattractant protein-1 (MCP-1).";
 RL ADV. EXP. MED. BIOL. 305:47-56(1991).
 RN [8]
 RP SEQUENCE OF 24-99.
 RX MEDLINE: 89184525.
 RA ROBINSON E.A., YOSHIMURA T., LEONARD E.J., TANAKA S., GRIFFIN P.R.,
 RA SHABANOWITZ J., HUNT D.F., APPELLA E.;
 RT "Complete amino acid sequence of a human monocyte chemoattractant, a
 RT putative mediator of cellular immune reactions.";
 RL PROC. NATL. ACAD. SCI. U.S.A. 86:1850-1854(1989).
 RN [9]
 RP SEQUENCE OF 29-53 AND 82-92.
 RX MEDLINE: 90211336.
 RA DECOCK B., CONINGS R., LENAERTS J.-P., BILIAU A., VAN DAMME J.;
 RT "Identification of the monocyte chemotactic protein from human
 RT osteosarcoma cells and monocytes: detection of a novel N-terminally
 RT processed form.";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 167:904-909(1990).
 RN [10]
 RP 3D-STRUCTURE MODELLING.
 RX MEDLINE: 91312872.
 RA GRONENBORN A.M., CLORE G.M.;
 RT "Modeling the three-dimensional structure of the monocyte chemo-
 RT attractant and activating protein MCAF/MCP-1 on the basis of the
 RT solution structure of interleukin-8.";
 RL PROTEIN ENG. 4:263-269(1991).
 RN [11]
 RP X-RAY CRYSTALLOGRAPHY (1.85 ANGSTROMS).
 RX MEDLINE: 97143315.
 RA LUBKOWSKI J., BUJACZ G., DOMAILLE P.J., HANDEL T.M., WLODAWER A.;
 RT "The structure of MCP-1 in two crystal forms provides a rare example
 RT of variable quaternary interactions.";
 RL NAT. STRUCT. BIOL. 4:64-69(1997).
 RN [12]
 RP STRUCTURE BY NMR.
 RX MEDLINE: 96234959.
 RA HANDEL T.M., DOMAILLE P.J.;
 RT "Heteronuclear (1H, 13C, 15N) NMR assignments and solution structure
 RT of the monocyte chemoattractant protein-1 (MCP-1) dimer.";
 RL BIOCHEMISTRY 35:6569-6584(1996).
 RN [13]
 RP EFFECT OF DELETION OF N-TERMINAL RESIDUES.
 RX MEDLINE: 96195223.
 RA WEBER M., UGUCCIONI M., BAGGIOLINI M., CLARK-LEWIS I., DAHINDEN C.A.;
 RT "Deletion of the NH2-terminal residue converts monocyte chemotactic
 RT protein 1 from an activator of basophil mediator release to an
 RT eosinophil chemoattractant.";
 RL J. EXP. MED. 183:681-685(1996).
 RN [14]
 RP MUTAGENESIS.
 RX MEDLINE: 94253189.
 RA ZHANG Y.J., RUTLEDGE B.J., ROLLINS B.J.;
 RT "Structure/activity analysis of human monocyte chemoattractant
 RT protein-1 (MCP-1) by mutagenesis. Identification of a mutated protein
 RT that inhibits MCP-1-mediated monocyte chemotaxis.";
 RL J. BIOL. CHEM. 269:15918-15924(1994).
 RN [15]
 RP SUBUNIT.
 RX MEDLINE: 97053697.
 RA KIM K.-S., RAJARATHNAM K., CLARK-LEWIS I., SYKES B.D.;
 RT "Structural characterization of a monomeric chemokine: monocyte
 RT chemoattractant protein-3.";
 RL FEBS LETT. 395:277-282(1996).
 CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES AND BASOPHILS
 CC BUT NOT NEUTROPHILS OR EOSINOPHILS. AUGMENTS MONOCYTE ANTI-TUMOR
 CC ACTIVITY. HAS BEEN IMPLICATED IN THE PATHOGENESIS OF DISEASES
 CC CHARACTERIZED BY MONOCYTIC INFILTRATES, LIKE PSORIASIS, RHEUMATOID
 CC ARTHRITIS OR ATHEROSCLEROSIS. MAY BE INVOLVED IN THE RECRUITMENT
 CC OF MONOCYTES INTO THE ARTERIAL WALL DURING THE DISEASE PROCESS OF

CC ATHEROSCLEROSIS.
 CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM.
 CC -!- PTM: PROCESSING AT THE N-TERMINUS CAN REGULATE RECEPTOR AND TARGET
 CC CELL SELECTIVITY. DELETION OF THE AMINO- TERMINAL RESIDUE CONVERTS
 CC IT FROM AN ACTIVATOR OF BASOPHIL TO AN EOSINOPHIL CHEMOATTRACTANT.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC
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 CC
 CC EMBL: M31626; G386961;
 CC EMBL: M30816; G386961; JOINED.
 CC EMBL: M31625; G386961; JOINED.
 CC EMBL: M24545; G307163;
 CC EMBL: M28226; G338009;
 CC EMBL: M14768; G34514;
 CC EMBL: M37119; G487124;
 CC EMBL: M28225; G338007; JOINED.
 CC EMBL: M28223; G338007; JOINED.
 CC EMBL: M28224; G338007; JOINED.
 CC EMBL: M69738; G545465;
 CC EMBL: S71513; G240868;
 CC EMBL: A17786; G641145;
 CC PIR: A35474; A35474.
 CC PIR: S03339; S03339.
 CC PDB: 1DOK; 12-MAR-97.
 CC PDB: 1DOL; 12-MAR-97.
 CC PDB: 1DOM; 14-OCT-96.
 CC PDB: 1DON; 14-OCT-96.
 CC PDB: 1MCA; 15-OCT-94.
 CC MIN: 158105;
 CC PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
 CC PFAM: PF00048; 118; 1. SIGNAL; INFLAMMATORY RESPONSE; 3D-STRUCTURE.
 CC CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE.
 CC SIGNAL 1 23
 CC FT CHAIN 24 24
 CC FT MOD_RES 34 24
 CC FT DISULFID 34 59
 CC FT DISULFID 35 75
 CC FT CARBOHYD 37 37
 CC FT VARIANT 76 76
 CC MISSING: LOSS OF ACTIVITY.
 CC MISSING: LOSS OF ACTIVITY.
 CC MISSING: 90% REDUCTION IN ACTIVITY.
 CC MISSING: 83% REDUCTION IN ACTIVITY.
 CC D->A: 90% REDUCTION IN ACTIVITY.
 CC N->A: 50% REDUCTION IN ACTIVITY.
 CC R->F: 95% REDUCTION IN ACTIVITY.
 CC S->Q: 40% REDUCTION IN ACTIVITY.
 CC Y->D: LOSS OF ACTIVITY.
 CC R->L: LOSS OF ACTIVITY.
 CC D->L: 90% REDUCTION IN ACTIVITY.
 CC SEQUENCE 99 AA; 11025 MW; 5355B695 CRC32;
 CC
 CC Query Match 75.8%; Score 75; DB 1; Length 99;
 CC Best Local Similarity 66.7%; Pred. No. 3.08e-04;
 CC Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
 CC
 CC Db 73 EICADPKQKVVQ 84
 CC 1:1:111:111
 CC QY 1 ELCLDPKNVQ 12
 CC
 CC RESULT 13
 CC ID MCP1_CANFA STANDARD; PRT; 101 AA.
 CC AC P52203;
 CC DT 01-OCT-1996 (REL. 34, CREATED)

DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1) (MONOCYTE
 DE CHEMOATTRACTANT PROTEIN-1).
 GN SCYA2 OR MCP1.
 OS CANIS FAMILIARIS (DOG).
 GN EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC CARNIVORA; METAZOA; CANIDAE; CANIS.
 CC
 CC [1]
 CC SEQUENCE FROM N.A.
 CC TISSUE-JUGULAR VEIN ENDOTHELIAL;
 CC MEDLINE; 97176620.
 CC KUMAR A.G., BALLANTYNE C.M., MICHAEL L.H., KUKIELKA G.L., YOUNGER K.A.,
 CC LINDSEY M.L., HAWKINS H.K., BIRDSALL H.H., MACKAY C.R., LAROSA G.J.,
 CC ROSSEN R.D., SMITH C.W., ENTMAN M.L.;
 CC "Induction of monocyte chemoattractant protein-1 in the small veins
 CC of the ischemic and reperfused canine myocardium.";
 CC CIRCULATION 95:693-700(1997).
 CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
 CC NEUTROPHILS. IMPORTANT FACTOR IN THE COURSE OF THE INFLAMMATORY
 CC REACTION TO REPERFUSION OF THE PREVIOUSLY ISCHEMIC MYOCARDIUM.
 CC MAY PLAY A SIGNIFICANT ROLE IN MONOCYTE TRAFFICKING INTO THE
 CC REPERFUSED MYOCARDIUM.
 CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
 CC -!- INDUCTION: BY TNF-ALPHA.
 CC -!- TISSUE SPECIFICITY: ENDOTHELIUM OF SMALL VEINS AND INTRAFASCICULAR
 CC VEINS, AND INFILTRATING LEUKOCYTES.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC
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 CC or send an email to license@isb-sib.ch).
 CC
 CC EMBL: U29653; G1144186;
 CC PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
 CC PFAM: PF00048; 118; 1.
 CC HSP: P13500; 1DON.
 CC CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE.
 CC SIGNAL 1 23
 CC FT CHAIN 24 101
 CC FT MOD_RES 24 24
 CC FT DISULFID 34 59
 CC FT DISULFID 35 75
 CC SEQUENCE 101 AA; 11121 MW; A7075B14 CRC32;
 CC
 CC Query Match 75.8%; Score 75; DB 1; Length 101;
 CC Best Local Similarity 66.7%; Pred. No. 3.08e-04;
 CC Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
 CC
 CC Db 73 EICADPKQKVVQ 84
 CC 1:1:111:111
 CC QY 1 ELCLDPKNVQ 12
 CC
 CC RESULT 14
 CC ID M1A_RAT STANDARD; PRT; 92 AA.
 CC AC P50229;
 CC DT 01-OCT-1996 (REL. 34, CREATED)
 CC DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
 CC DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
 CC DE MACROPHAGE INFLAMMATORY PROTEIN 1-ALPHA PRECURSOR (MIP-1-ALPHA).
 CC GN SCYA3 OR M1PA.
 CC OS RATTUS NORVEGICUS (RAT).
 CC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
 CC [1]
 CC SEQUENCE FROM N.A.
 CC RP

```

RC STRAIN-CD-1; TISSUE-LUNG;
RX MEDLINE; 95298037.
RA SHI M.M., GODLESKI J.J., PAULASKIS J.D.;
RT "Molecular cloning and posttranscriptional regulation of macrophage
RL inflammatory protein-1 alpha in alveolar macrophages.";
RN BIOCHEM. BIOPHYS. RES. COMMUN. 211:289-295(1995).
RP [2]
RC SEQUENCE FROM N.A.
RX STRAIN-LONG EVANS; TISSUE-LUNG;
RX MEDLINE; 95238980.
RA SHANLEY T.P., SCHMAL H., FRIEDL H.P., JONES M.L., WARD P.A.;
RT "Role of macrophage inflammatory protein-1 alpha (MIP-1 alpha) in
RL acute lung injury in rats.";
RN J. IMMUNOL. 154:4793-4802(1995).
RP [3]
RC SEQUENCE OF 24-57.
RC STRAIN-WISTAR;
RX MEDLINE; 96183056.
RA NAKAGAWA H., SHIOTA S., TAKANO K., SHIBATA F., KATO H.;
RT "Cytokine-induced neutrophil chemoattractant (CINC)-2 alpha, a novel
RL member of rat GRO/CINC, is a predominant chemokine produced by
RN lipopolysaccharide-stimulated rat macrophages in culture.";
RP BIOCHEM. BIOPHYS. RES. COMMUN. 220:945-948(1996).
RC [1]
CC -1- FUNCTION: MONOKINE WITH INFLAMMATORY AND CHEMOKINETIC PROPERTIES.
CC HAS CHEMOTACTIC ACTIVITY FOR MONOCYTES, NEUTROPHILS, EOSINOPHILS,
CC BASOPHILS, AND LYMPHOCYTES REQUIRED FOR LONG TNF-ALPHA
CC PRODUCTION. NEUTROPHIL RECRUITMENT AND SUBSEQUENT LUNG INJURY AND
CC MAY FUNCTION AS AN AUTOCRINE MEDIATOR FOR THE MACROPHAGE
CC PRODUCTION OF TNF-ALPHA WHICH IN TURN UP-REGULATES VASCULAR
CC ADHESION MOLECULES REQUIRED FOR NEUTROPHIL INFILX. THIS PROTEIN
CC BINDS HEPARIN.
CC -1- INDUCTION: BY LIPOPOLYSACCHARIDE (LPS).
CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC -----
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CC or send an email to license@isb-sib.ch).
CC -----
DR EMBL; U22414; G790633; -.
DR EMBL; U06435; G459150; -.
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; 118; 1.
DR HSSP; P13236; 1HUN.
KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL; HEPARIN-BINDING.
FT SIGNAL 1 23
FT CHAIN 24 92
FT DISULFID 34 57
FT DISULFID 35 73
FT CONFLICT 6 6
FT CONFLICT 57 57
FT CONFLICT C -> W (IN REF. 2)
FT CONFLICT C -> W (IN REF. 2 AND 3).
SQ SEQUENCE 92 AA; 10335 MW; F48CF89F CRC32;
Query Match 74.7%; Score 74; DB 1; Length 92;
Best Local Similarity 66.7%; Pred. No. 5.17e-04;
Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;
Db 71 QICADPKETWVQ 82
QY 1 ELCLDPKENVQ 12
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RESULT 15
ID MCP1_PIG STANDARD; PRT; 99 AA.
AC P42831;
DT 01-NOV-1995 (REL. 32, CREATED)
DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1).

```

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GN SCVA2.
OS SUS SCROFA (FIG).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC ARTIODACTYLA; SUIFORMES; SUINA; SUIDAE; SUS.
RP [1]
RX SEQUENCE FROM N.A.
RX MEDLINE; 94183284.
RA HOSANG K., KNOKE I., KLAUDINY J., WEMPE F., WUTTKER W., SCHEIT K.H.;
RT "Porcine luteal cells express monocyte chemoattractant protein-1
RL (MCP-1): analysis by polymerase chain reaction and cDNA cloning.";
RN BIOCHEM. BIOPHYS. RES. COMMUN. 199:962-968(1994).
RP [2]
RC SEQUENCE FROM N.A.
RC TISSUE-BRAIN;
RL ZACH O.R.F.;
RL SUBMITTED (JUL-1994) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -1- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
CC NEUTROPHILS.
CC -1- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC -----
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CC or send an email to license@isb-sib.ch).
CC -----
DR EMBL; Z48479; G683717; -.
DR EMBL; X79416; G872313; -.
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; 118; 1.
DR HSSP; P13500; 1DON.
KW CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE.
FT SIGNAL 1 23
FT CHAIN 24 99
FT MOD_RES 24 24
FT MOD_RES 24 24
FT DISULFID 34 59
FT DISULFID 35 75
FT DISULFID BY SIMILARITY.
FT DISULFID BY SIMILARITY.
SQ SEQUENCE 99 AA; 10976 MW; ECG3AFB4 CRC32;
Query Match 74.7%; Score 74; DB 1; Length 99;
Best Local Similarity 58.3%; Pred. No. 5.17e-04;
Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;
Db 73 EICAEPKQKVVQ 84
QY 1 ELCLDPKENVQ 12
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Search completed: Fri Feb 4 17:09:51 2000
Job time : 7 secs.

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(TM)

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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 17:08:49 2000; MasPar time 3.58 Seconds
134.457 Million cell updates/sec

Tabular output not generated.

Title: >US-09-150-813-40
Description: (1-12) from US09150813.pap
Perfect Score: 99
Sequence: 1 ELCLDPKENWVQ 12

Scoring table: PAM 150
Gap 15

Searched: 122810 seqs, 40068593 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: pir60
1:pir1 2:pir2 3:pir3 4:pir4

Statistics: Mean 25.485; Variance 37.640; scale 0.677

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES							
Result No.	Score	Query Match %	Length	ID	Description	Pred. No.	
1	99	100.0	99	2	A37034	interleukin-8 precurs	1.41e-08
2	95	96.0	101	2	I46871	interleukin-8 - rabbi	1.10e-07
3	88	88.9	95	2	JN0841	interleukin-8 - dog	3.72e-06
4	88	88.9	101	2	I46997	interleukin-8 - sheep	3.72e-06
5	88	88.9	101	2	S42496	interleukin-8 - sheep	3.72e-06
6	88	88.9	103	2	A44253	alveolar macrophage c	3.72e-06
7	88	88.9	103	2	A53096	interleukin-8 precurs	3.72e-06
8	85	85.9	101	2	I48148	Neutrophil attractant	1.63e-05
9	81	81.8	99	2	JC2336	monocyte chemoattract	1.14e-04
10	81	81.8	99	2	A39296	monocyte chemoattract	1.14e-04
11	75	75.8	99	2	A60299	monocyte chemoattract	1.96e-03
12	74	74.7	92	2	I52322	macrophage inflammato	3.12e-03
13	74	74.7	99	2	JC2136	monocyte chemoattract	3.12e-03
14	72	72.7	103	2	I50417	RSV-induced protein -	7.83e-03
15	72	72.7	103	2	A26736	transformation-induce	7.83e-03
16	70	70.7	148	2	A30209	PDGF-inducible JE gly	1.94e-02
17	69	69.7	99	2	JC5295	monocyte chemoattract	3.05e-02
18	69	69.7	120	2	JF0177	lymphocyte and monocy	3.05e-02
19	69	69.7	125	2	I46857	monocyte chemoattract	3.05e-02
20	68	68.7	97	2	JC4912	eotaxin precursor - h	4.77e-02
21	68	68.7	109	2	A54678	monocyte chemoattract	4.77e-02
22	67	67.7	92	2	A32393	macrophage inflammato	7.43e-02
23	67	67.7	99	2	JC2417	monocyte chemoattract	7.43e-02

24	67	67.7	120	2	I48147	monocyte chemoattract	7.43e-02
25	66	66.7	50	2	C60407	monocyte adherence-in	1.15e-01
26	66	66.7	89	2	A53497	pre-B-cell growth-sti	1.15e-01
27	66	66.7	89	2	I53416	interleukin-8 homolog	1.15e-01
28	66	66.7	92	2	A30574	macrophage inflammato	1.15e-01
29	66	66.7	92	1	A31767	macrophage inflammato	1.15e-01
30	66	66.7	93	2	I81182	cytokine - mouse	1.15e-01
31	66	66.7	93	2	G01540	cytokine SDF-1-beta -	1.15e-01
32	66	66.7	93	2	B35673	LD78-beta protein pre	1.15e-01
33	65	65.7	96	2	I48099	eotaxin precursor - g	1.79e-01
34	65	65.7	96	2	JC2478	eotaxin precursor - r	1.79e-01
35	65	65.7	148	2	S07723	immune activation gen	1.79e-01
36	63	63.6	92	2	I46730	1-aminocyclopropane-1	4.24e-01
37	63	63.6	455	2	S56695	1-aminocyclopropane-1	4.24e-01
38	63	63.6	485	2	A35516	1-aminocyclopropane-1	4.24e-01
39	63	63.6	485	2	S19677	conserved hypohetica	9.89e-01
40	61	61.6	176	2	F69370	urease accessory prot	1.50e+00
41	60	60.6	194	2	F64075	regulatory protein ko	2.27e+00
42	59	59.6	85	2	C35387	plasma retinol-bindin	3.42e+00
43	58	58.6	201	1	VART	1-aminocyclopropane-1	3.42e+00
44	58	58.6	496	2	A47199	DNA-binding protein A	3.42e+00
45	58	58.6	770	2	A54444		

ALIGNMENTS

RESULT 1

ENTRY A37034 #type complete

TITLE interleukin-8 precursor - human

ALTERNATE_NAMES beta-thromboglobulin-like protein; fibroblast-derived neutrophil-activating factor alpha; lung carcinoma-derived chemotaxin; lymphocyte-derived neutrophil-activating factor; monocyte-derived neutrophil chemotactic factor; monocyte-derived neutrophil-activating factor

ORGANISM #formal_name Homo sapiens #common_name man

DATE 08-Dec-1992 #sequence_revision 08-Dec-1992 #text_change 17-Mar-1999

ACCESSIONS A37034; J00041; A32791; S37634; P0107; A28598; A27488; A39960; A60401; A60591; S15827; S04216; A60567; A60847; S15417; S03975; I54560; I55992; I37902; S67519

REFERENCE A37034

#authors Mukaida, N.; Shiroo, M.; Matsushima, K.

#journal J. Immunol. (1989) 143:1366-1371

#title Genomic structure of the human monocyte-derived neutrophil chemotactic factor IL-8.

#cross-references MUID:89309826

#accession A37034

#molecule_type DNA

#residues 1-99 #label MUK

#cross-references GB:M28130; NID:g186367; PID:g186368

#note the authors failed to translate the last thirty-six nucleotides of the second exon

REFERENCE J00041

#authors Matsushima, K.; Morishita, K.; Yoshimura, T.; Lavu, S.; Kobayashi, Y.; Lew, W.; Appella, E.; Kung, H.F.; Leonard, E.J.; Oppenheim, J. J.

#journal J. Exp. Med. (1988) 167:1883-1893

#title Molecular cloning of a human monocyte-derived neutrophil chemotactic factor (MDNCF) and the induction of MDNCF mRNA by interleukin 1 and tumor necrosis factor.

#cross-references MUID:88258376

#accession J00041

#molecule_type mRNA

#residues 1-99 #label MA1

#cross-references EMBL:Y00787; NID:g34518; PID:g34519

#note the sequence shows similarity to several platelet-derived factors, a v-src-induced protein, a growth-regulated gene product (gro), and an IFN-gamma-inducible protein

REFERENCE A32791

#authors Kowalski, J.; Denhardt, D.T.

#journal Mol. Cell. Biol. (1989) 9:1946-1957

#title Regulation of the mRNA for monocyte-derived

neutrophil-activating peptide in differentiating HL60 promyelocytes.
#cross-references MUID:89313739
#accession A32791
##molecule_type mRNA
##residues 1-99 ##label KOW
#cross-references GB:M26393; NID:g188627; PID:g188628
#journal S37634
#authors King, C.H.; Gordon, G.S.; Konieczkowski, M.; Sedor, J.R.
#submission Submitted to the EMBL Data Library, February 1992
#accession S37634
##status preliminary
##molecule_type mRNA
##residues 1-97 ##label KIN
#cross-references EMBL:Z11686; NID:g33958; PID:g33959
#journal P10107
#authors Suzuki, K.; Miyasaka, H.; Ota, H.; Yamakawa, Y.; Tagawa, M.; Kuramoto, A.; Mizuno, S.
#journal J. Exp. Med. (1989) 169:1895-1901
#title Purification and partial primary sequence of a chemotactic protein for polymorphonuclear leukocytes derived from human lung giant cell carcinoma LU65C cells.
#cross-references MUID:89279141
#accession P10107
##molecule_type protein
##residues 23-32,'XR',35,'X',37-52,'L',54 ##label SUZ
#experimental_source lung giant cell carcinoma LU65C
#journal A28598
#authors Gregory, H.; Young, J.; Schroeder, J.M.; Mrowietz, U.; Christophers, E.
#journal Biochem. Biophys. Res. Commun. (1988) 151:883-890
#title Structure determination of a human lymphocyte derived neutrophil activating peptide (LYNAP).
#cross-references MUID:88162914
#accession A28598
##molecule_type protein
##residues 28-99 ##label GRE
#journal A27488
#authors Walz, A.; Peveri, P.; Aschauer, H.; Baggiolini, M.
#journal Biochem. Biophys. Res. Commun. (1987) 149:755-761
#title Purification and amino acid sequencing of NAF, a novel neutrophil-activating factor produced by monocytes.
#cross-references MUID:88106502
#accession A27488
##molecule_type protein
##residues 28-59 ##label WAL
#journal A39960
#authors Yoshimura, T.; Matsushima, K.; Tanaka, S.; Robinson, E.A.; Appella, E.; Oppenheim, J.J.; Leonard, E.J.
#journal Proc. Natl. Acad. Sci. U.S.A. (1987) 84:9233-9237
#title Purification of a human monocyte-derived neutrophil chemotactic factor that has peptide sequence similarity to other host defense cytokines.
#cross-references MUID:88097462
#accession A39960
##molecule_type protein
##residues 28-69 ##label YOS
#journal A60401
#authors Schroeder, J.M.; Sticherling, M.; Henneicke, H.H.; Preissner, W.C.; Christophers, E.
#journal J. Immunol. (1990) 144:2223-2232
#title IL-1alpha or tumor necrosis factor-alpha stimulate release of three NAP-1/IL-8-related neutrophil chemotactic proteins in human dermal fibroblasts.
#cross-references MUID:90187866
#accession A60401
##molecule_type protein
##residues 23-32 ##label SCH
#experimental_source dermal fibroblasts
#note a minor component of this material (15%) includes an additional two amino acids at the amino end
#journal A60591
#authors Van Damme, J.; Decock, B.; Conings, R.; Lenaerts, J.P.;

Opdenakker, G.; Billiau, A.
Eur. J. Immunol. (1989) 19:1189-1194
#title The chemotactic activity for granulocytes produced by virally infected fibroblasts is identical to monocyte-derived interleukin 8
#cross-references MUID:89338542
#accession A60591
##molecule_type protein
##residues 23-33,'X',35,'X',37-42 ##label VAN
#journal S15827
#authors Nakagawa, H.; Hatakeyama, S.; Ikese, A.; Miyai, H.
#journal FEBS Lett. (1991) 282:412-414
#title Generation of interleukin-8 by plasmin from AVLPK-interleukin-8, the human fibroblast-derived neutrophil chemotactic factor.
#cross-references MUID:91243843
#accession S15827
##molecule_type protein
##residues 23-33,'X',35,'X',37-47 ##label FEB
#journal S04216
#authors van Damme, J.; van Beeumen, J.; Conings, R.; Decock, B.; Billiau, A.
#journal Eur. J. Biochem. (1989) 181:337-344
#title Purification of granulocyte chemotactic peptide/interleukin-8 reveals N-terminal sequence heterogeneity similar to that of beta-thromboglobulin.
#cross-references MUID:89231715
#accession S04216
##molecule_type protein
##residues 21-67 ##label VA2
#journal A60567
#authors Yoshimura, T.; Robinson, E.A.; Appella, E.; Matsushima, K.; Showalter, S.D.; Skeel, A.; Leonard, E.J.
#journal Mol. Immunol. (1989) 26:87-93
#title Three forms of monocyte-derived neutrophil chemotactic factor (MDNCF) distinguished by different lengths of the amino-terminal sequence.
#cross-references MUID:89181632
#accession A60567
##molecule_type protein
##residues 21-33,'X',35,'X',37-47 ##label YO2
#note the forms starting from positions 21, 23, and 28 represented 8%, 47%, and 45%, respectively, of total interleukin-8
#journal A60847
#authors Van Damme, J.; Van Beeumen, J.; Opdenakker, G.; Billiau, A.
#journal J. Exp. Med. (1988) 167:1364-1376
#title A novel, NH-2-terminal sequence-characterized human monokine possessing neutrophil chemotactic, skin-reactive, and granulocytosis-promoting activity.
#cross-references MUID:88187604
#accession A60847
##molecule_type protein
##residues 28-47 ##label VA3
#journal S15417
#authors Car, B.D.; Baggiolini, M.; Walz, A.
#journal Biochem. J. (1991) 275:581-584
#title Formation of neutrophil-activating peptide 2 from platelet-derived connective-tissue-activating peptide III by different tissue proteinases.
#cross-references MUID:91248085
#accession S15417
##status preliminary
##molecule_type protein
##residues 28-99 ##label CAR
#journal S03975
#authors Golds, E.E.; Mason, P.; Nyirkos, P.
#journal Biochem. J. (1989) 259:585-588
#title Inflammatory cytokines induce synthesis and secretion of gro protein and a neutrophil chemotactic factor but not beta-2-microglobulin in human synovial cells and fibroblasts.
#cross-references MUID:89246368

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#accession S03975
#molecule_type protein
#residues 23-46 #label GOL
REFERENCE
#authors Hotta, K.; Hayashi, K.; Ishikawa, J.; Tagawa, M.; Hashimoto, K.; Mizuno, S.; Suzuki, K.
#journal Immunol. Lett. (1990) 24:165-170
#title Coding region structure of Interleukin-8 gene of human lung
...
Note: remainder of annotations omitted.
Query Match 100.0%; Score 99; DB 2; Length 99;
Best Local Similarity 100.0%; Pred. No. 1.41e-08;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Db 75 ELCLDPKKNWQ 86
|:|||||:|
QY 1 ELCLDPKKNWQ 12

RESULT 2
ENTRY #type complete
TITLE interleukin-8 - rabbit
ALTERNATE_NAMES neutrophil attractant/activation protein-1
ORGANISM #formal_name Oryctolagus cuniculus #common_name domestic rabbit
DATE 14-Feb-1997 #sequence_revision 14-Feb-1997 #text_change
09-Aug-1997
I46871; S13052
I46857
Yoshimura, T.; Yuhki, N.
J. Immunol. (1991) 146:3483-3488
Neutrophil attractant/activation protein-1 and monocyte
chemoattractant protein-1 in rabbit: cDNA cloning and their
expression in spleen cells.
#cross-references MUID:91225489
#accession I46871
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#molecule_type mRNA
#residues_type 1-101 #label YOS
#cross-references GB:M57439; NID:gl65552; PID:gl65553
S13052
REFERENCE
#authors Beaubien, B.C.; Collins, P.D.; Jose, P.J.; Totty, N.F.; Hsuan, J.; Waterfield, M.D.; Williams, T.J.
#journal Biochem. J. (1990) 271:797-801
#title A novel neutrophil chemoattractant generated during an inflammatory reaction in the rabbit peritoneal cavity in vivo. Purification, partial amino acid sequence and structural relationship to interleukin 8.
#cross-references MUID:91058518
#accession S13052
#molecule_type protein
#residues_type 23-33, 'X', 35, 'X', 37-46, 'X', 48-49, 'I', 51-53 #label BEA
CLASSIFICATION #superfamily beta-thromboglobulin
KEYWORDS cytokine
SUMMARY #length 101 #molecular-weight 11402 #checksum 1085

Query Match 96.0%; Score 95; DB 2; Length 101;
Best Local Similarity 91.7%; Pred. No. 1.10e-07;
Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 75 ELCLDPKKNWQ 86
|:|||||:|
QY 1 ELCLDPKKNWQ 12

RESULT 3
ENTRY #type complete
TITLE interleukin-8 - dog
ORGANISM #formal_name Canis lupus familiaris #common_name dog
DATE 19-May-1994 #sequence_revision 19-May-1994 #text_change
12-Apr-1995
JN0841
ACCESSIONS

```

```

JN0841
Ishikawa, J.; Suzuki, S.; Hotta, K.; Hirota, Y.; Mizuno, S.; Suzuki, K.
Gene (1993) 131:305-306
#journal Cloning of a canine gene homologous to the human interleukin-8-encoding gene.
#title Interleukin-8-encoding gene.
#cross-references MUID:94010328
#accession JN0841
#molecule_type DNA
#residues_type 1-95 #label ISH
COMMENT This protein is a polymorphonuclear leukocytes chemotactic factor and is involved in the host defense function.
GENETICS
#introns 22/1; 67/2
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 95 #molecular-weight 10611 #checksum 3157

Query Match 88.9%; Score 88; DB 2; Length 95;
Best Local Similarity 83.3%; Pred. No. 3.72e-06;
Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
Db 75 EVCLDPKKNWQ 86
|:|||||:|
QY 1 ELCLDPKKNWQ 12

RESULT 4
ENTRY #type complete
TITLE interleukin-8 - sheep
ORGANISM #formal_name Ovis sp. #common_name sheep
DATE 21-Feb-1997 #sequence_revision 21-Feb-1997 #text_change
09-May-1997
I46997
ACCESSIONS
REFERENCE
#authors Secow, H.F.; Yoshimura, T.; Wood, P.R.; Colditz, I.G.
#journal Immunol. Cell Biol. (1994) 72:398-405
#title Cloning, sequencing, expression and inflammatory activity in skin of ovine interleukin-8.
#cross-references MUID:95137691
#accession I46997
#status preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues_type 1-101 #label SEO
#cross-references GB:S74436; NID:g786590; PID:g786591
GENETICS
#gene OIL-8
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 101 #molecular-weight 11292 #checksum 294

Query Match 88.9%; Score 88; DB 2; Length 101;
Best Local Similarity 83.3%; Pred. No. 3.72e-06;
Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
Db 75 EVCLDPKKNWQ 86
|:|||||:|
QY 1 ELCLDPKKNWQ 12

RESULT 5
ENTRY #type complete
TITLE interleukin 8 - sheep
ORGANISM #formal_name Ovis orientalis aries, Ovis ammon aries
#common_name domestic sheep
DATE 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change
08-Sep-1997
S42496
ACCESSIONS
REFERENCE
#authors Legastelois, I.; Greenland, T.; Arnaud, P.; Mornex, J.F.; Cordier, G.
#submission submitted to the EMBL Data Library, March 1994
#description Nucleotide sequence of ovine interleukin 8 cDNA using polymerase chain reaction.
#accession S42496

```



```

##status preliminary
##molecule_type mRNA
##residues 1-101 #label LEG
##cross-references EMBL:X78306; NID:g463253; PID:g463254
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 101 #molecular-weight 11292 #checksum 294

Query Match 88.9%; Score 88; DB 2; Length 101;
Best Local Similarity 83.3%; Pred. No. 3.72e-06;
Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 75 EVCLDPKRWQ 86
I:|||||:|
QY 1 ELCLDPKRWQ 12

RESULT 6
ENTRY #type complete
TITLE alveolar macrophage chemotactic factor-I (AMCF-I)
ORGANISM interleukin-8 homolog - pig
DATE #formal_name Sus scrofa domestica #common_name domestic pig
#sequence_revision 18-Nov-1994 #text_change
ACCESSIONS A44253
REFERENCE Goodman, R.B.; Foster, D.C.; Mathewes, S.L.; Osborn, S.G.;
#authors Kuijper, J.L.; Forstrom, J.W.; Martin, T.R.
#journal Biochemistry (1992) 31:10483-10490
#title Molecular cloning of porcine alveolar macrophage-derived
#neutrophil chemotactic factors I and II; identification of
#porcine IL-8 and another intercrine-alpha protein.
#cross-references MUID:93041741
#accession A44253
##status preliminary
##molecule_type mRNA; protein
##residues 1-103 #label GOO
##experimental_source alveolar macrophage
#note sequence extracted from NCBI backbone (NCBIN:117415,
NCBIP:117416)
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 103 #molecular-weight 11677 #checksum 8904

Query Match 88.9%; Score 88; DB 2; Length 103;
Best Local Similarity 83.3%; Pred. No. 3.72e-06;
Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 75 EVCLDPKRWQ 86
I:|||||:|
QY 1 ELCLDPKRWQ 12

RESULT 7
ENTRY #type complete
TITLE interleukin-8 precursor - pig
ORGANISM #formal_name Sus scrofa domestica #common_name domestic pig
DATE 02-Jun-1995 #sequence_revision 02-Jun-1995 #text_change
ACCESSIONS A53096
REFERENCE Lin, G.; Pearson, A.E.; Scamurra, R.W.; Zhou, Y.; Baarsch,
#authors M.J.; Weiss, D.J.; Murtaugh, M.P.
#journal J. Biol. Chem. (1994) 269:77-85
#title Regulation of interleukin-8 expression in porcine alveolar
#macrophages by bacterial lipopolysaccharide.
#cross-references MUID:94103307
#accession A53096
##status preliminary
##molecule_type mRNA
##residues 1-103 #label LIN
##cross-references GB:M86923; NID:g164520; PID:g164521
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 103 #molecular-weight 11633 #checksum 8835

Query Match 88.9%; Score 88; DB 2; Length 103;
Best Local Similarity 83.3%; Pred. No. 3.72e-06;
Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 75 EVCLDPKRWQ 86
I:|||||:|
QY 1 ELCLDPKRWQ 12

RESULT 8
ENTRY #type complete
TITLE Neutrophil attractant protein-1 - guinea pig
ORGANISM #formal_name Cavia porcellus #common_name guinea pig
DATE 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change
ACCESSIONS I48148
REFERENCE Yoshimura, T.; Johnson, D.G.
#authors J. Immunol. (1993) 151:6225-6236
#journal cDNA cloning and expression of guinea pig neutrophil
#title attractant protein-1 (NAP-1): NAP-1 is highly conserved in
#guinea pig.
#cross-references MUID:94065176
#accession I48148
##status preliminary; translated from GB/EMBL/DBJ
##molecule_type DNA
##residues 1-101 #label RES
##cross-references GB:I04986; NID:g459764; PID:g459765
GENETICS NAP-1
#gene #superfamily beta-thromboglobulin
CLASSIFICATION #length 101 #molecular-weight 11414 #checksum 2363
SUMMARY

Query Match 85.9%; Score 85; DB 2; Length 101;
Best Local Similarity 75.0%; Pred. No. 1.63e-05;
Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 75 QICLDPKRWQ 86
I:|||||:|
QY 1 ELCLDPKRWQ 12

RESULT 9
ENTRY #type complete
TITLE monocyte chemoattractant protein-1 - bovine
ORGANISM #formal_name Bos primigenius indicus #common_name zebu cattle
DATE 20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change
ACCESSIONS JC2336
REFERENCE Wempe, F.; Kuhlmann, J.K.; Scheit, K.H.
#authors Biochem. Biophys. Res. Commun. (1994) 202:1272-1279
#journal Characterization of the bovine monocyte chemoattractant
#title protein-1 gene.
#cross-references MUID:94338337
#accession JC2336
##molecule_type protein
##residues 1-99 #label WEM
GENETICS MCP-1
#gene 26/1: 65/2
#introns #superfamily macrophage inflammatory protein
CLASSIFICATION #length 99 #molecular-weight 11114 #checksum 9401
SUMMARY

Query Match 81.8%; Score 81; DB 2; Length 99;
Best Local Similarity 75.0%; Pred. No. 1.14e-04;
Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 73 ELCADPKRWQ 84
I:|||||:|
QY 1 ELCLDPKRWQ 12

```


Sat Feb 5 15:13:51 2000

```

RESULT 10
ENTRY
  TITLE      #type complete
  ALTERNATE_NAMES
  ORGANISM   monocyte chemoattractant protein 1 precursor - bovine
  DATE       #formal_name Bos primigenius taurus #common_name cattle
  03-Aug-1992 #sequence_revision 03-Aug-1992 #text_change
  31-Oct-1997
ACCESSIONS
REFERENCE
  #authors   Wempe, F.; Henschen, A.; Scheit, K.H.
  #journal   DNA Cell Biol. (1991) 10:671-679
  #title     Gene expression and cDNA cloning identified a major basic
              protein constituent of bovine seminal plasma as bovine
              monocyte-chemoattractant protein-1 (MCP-1).
#cross-references MUID:92096117
#accession A39296
  #molecule_type mRNA
  #residues 1-99 #label WEM
#cross-references GB:M84602; GB:M85264; NID:g163394; PID:g163395
#accession B39296
  #molecule_type protein
  #residues 50-68,'X',70-74,'X',76 #label WE2
#EXPERIMENTAL_source seminal vesicle
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS
  1-23
  24-99
  94
SUMMARY
  #domain signal sequence #status predicted #label SIG\
  #product monocyte chemoattractant protein 1 #status
  #predicted #label MAT\
  #binding_site carbohydrate (Asn) (covalent) #status
  #length 99 #molecular_weight 11114 #checksum 9401
  Query Match 81.8%; Score 81; DB 2; Length 99;
  Best Local Similarity 75.0%; Pred. NO. 1.14e-04;
  Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 73 ELCADPKQKVVQ 84
QY 1 ELCLDPKENVQ 12

RESULT 11
ENTRY
  TITLE      #type complete
  ALTERNATE_NAMES
  ORGANISM   monocyte chemoattractant protein 1 precursor - human
  DATE       GDCF-1; glioma-derived monocyte chemotactic factor 1; MCAF;
              MCP-1; monocyte chemotactic factor 1; monocyte secretory
              protein; tumor-derived chemotactic factor
              glioma-derived chemotactic factor 2 (GDCF-2)
              #formal_name Homo sapiens #common_name man
              20-Feb-1993 #sequence_revision 20-Feb-1993 #text_change
              20-Mar-1998
ACCESSIONS
REFERENCE
  #authors   SHY, Y.J.; Li, Y.S.; Kolattukudy, P.E.
  #journal   Biochem. Biophys. Res. Commun. (1990) 169:346-351
  #title     Structure of human monocyte chemotactic protein gene and its
              regulation by TPA.
#cross-references MUID:90290466
#accession A35474
  #molecule_type DNA
  #residues 1-99 #label SHY
#cross-references GB:M37719; NID:g187447; PID:g487124
REFERENCE
  #authors   Rollins, B.J.; Stier, P.; Ernst, T.; Wong, G.G.
  #journal   Mol. Cell. Biol. (1989) 9:4687-4695
  #title     The human homolog of the JE gene encodes a monocyte secretory
              protein.
#cross-references MUID:90097880
#accession A33476
  #molecule_type mRNA
  #residues 1-99 #label ROL

```

```

#cross-references GB:M30816; GB:M31625; GB:M31626; NID:g188701;
PID:g386961
REFERENCE
  #authors   Yoshimura, T.; Yuhki, N.; Moore, S.K.; Appella, E.; Lerman,
              M.I.; Leonard, E.J.
  #journal   FEBS Lett. (1989) 244:487-493
  #title     Human monocyte chemoattractant protein-1 (MCP-1). Full-length
              cDNA cloning, expression in mitogen-stimulated blood
              mononuclear leukocytes, and sequence similarity to mouse
              competence gene JE.
#cross-references MUID:89153605
#accession S03339
  #status    not compared with conceptual translation
  #molecule_type mRNA
  #residues 1-99 #label YOS
#cross-references GB:X14768; NID:g34513; PID:g34514
#EXPERIMENTAL_source glioma cell line U-105MG
REFERENCE
  #authors   Yoshimura, T.; Leonard, E.J.
  #journal   Adv. Exp. Med. Biol. (1991) 305:47-56
  #title     Human monocyte chemoattractant protein-1 (MCP-1).
#cross-references MUID:92095166
#accession I51841
  #status    preliminary; translated from GB/EMBL/DBJ
  #molecule_type mRNA
  #residues 1-99 #label YO2
#cross-references GB:S71513; NID:g240867; PID:g240868
REFERENCE
  #authors   Bottazzi, B.; Colotta, F.; Sica, A.; Nobili, N.; Mantovani,
              A.
  #journal   Int. J. Cancer (1990) 45:795-797
  #title     A chemoattractant expressed in human sarcoma cells
              (tumor-derived chemotactic factor, TDCF) is identical to
              monocyte chemoattractant protein-1/monocyte chemotactic and
              activating factor (MCP-1/MCAF).
#accession A60299
  #status    not compared with conceptual translation
  #molecule_type mRNA
  #residues 1-99 #label BOT
REFERENCE
  #authors   Furutani, Y.; Nomura, H.; Notake, M.; Oyama, Y.; Fukui, T.;
              Yamada, M.; Larsen, C.G.; Oppenheim, J.J.; Matsushima, K.
  #journal   Biochem. Biophys. Res. Commun. (1989) 159:249-255
  #title     Cloning and sequencing of the cDNA for human monocyte
              chemotactic and activating factor (MCAF).
#cross-references MUID:89165862
#accession A32300
  #status    not compared with conceptual translation
  #molecule_type mRNA
  #residues 1-99 #label FUR
#cross-references GB:M24545; NID:g187434; PID:g307163
REFERENCE
  #authors   Robinson, E.A.; Yoshimura, T.; Leonard, E.J.; Tanaka, S.;
              Griffin, P.R.; Shabanowitz, J.; Hunt, D.F.; Appella, E.
  #journal   Proc. Natl. Acad. Sci. U.S.A. (1989) 86:1850-1854
  #title     Complete amino acid sequence of a human monocyte
              chemoattractant, a putative mediator of cellular immune
              reactions.
#cross-references MUID:89184525
#accession A32396
  #molecule_type protein
  #residues 'X',25-99 #label ROB
REFERENCE
  #authors   Decock, B.; Conings, R.; Lenaerts, J.P.; Billiau, A.; Van
              Damme, J.
  #journal   Biochem. Biophys. Res. Commun. (1990) 167:904-909
  #title     Identification of the monocyte chemotactic protein from human
              osteosarcoma cells and monocytes: detection of a novel
              N-terminally processed form.
#cross-references MUID:90211336
#accession A34561
  #molecule_type protein
  #residues 29-33,'XX',36-52;82-92 #label DEC

```

```

REFERENCE I57488
#authors Li, Y.S.; Shyy, Y.J.; Wright, J.G.; Valente, A.J.; Cornhill,
#journal J.F.; Kolattukudy, P.E.
#title Mol. Cell. Biochem. (1993) 126:61-68
#cross-references MUID:94150478
#accession I57488
##status translated from GB/EMBL/DBJ
##molecule_type mRNA
##residues 1-99 ##label LIY
##cross-references GB:S69738; NID:g545464; PID:g545465
REFERENCE JC1096
#authors Ye, Q.N.; Su, G.F.; Yuan, Y.; Huang, C.F.
#journal Chinese J. Microbiol. Immunol. (1994) 14:29-32
#title The PCR, cloning and sequencing of human monocyte
#accession JC1096
#molecule_type mRNA
##residues 24-28,'Q',30-99 ##label YEQ
GENETICS
#gene GDB:SCYA2
##cross-references GDB:I125279; OMIM:158105
#map_position 17q11.2-17q12
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS cytokine; glycoprotein; inflammation; pyroglutamic acid
FEATURE
1-23
24-99
#domain signal sequence #status predicted #label SIG\
#product monocyte chemoattractant protein 1 #status
experimental #label MAT\
#product monocyte chemoattractant protein 1 #status
#status experimental #label MAT2\
#modified site pyrrolidone carboxylic acid (Gln) (in
mature form) #status experimental\
#binding_site carbohydrate (Asn) (covalent) #status
predicted
SUMMARY
#length 99 #molecular-weight 11025 #checksum 7984
Query Match 75.8%; Score 75; DB 2; Length 99;
Best Local Similarity 66.7%; Pred. No. 1.96e-03;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 73 EICADPKKQWVQ 84
QY 1 ELCLDPKENWVQ 12

RESULT 12
ENTRY I52322
TITLE macrophage inflammatory protein-1alpha - rat
ORGANISM #formal_name Rattus norvegicus #common_name Norway rat
DATE 29-May-1998 #sequence_revision 29-May-1998 #text_change
02-Jul-1998
ACCESSIONS I52322
REFERENCE I52322
#authors Shi, M.M.; Godleski, J.J.; Paulauskis, J.D.
#journal Biochem. Biophys. Res. Commun. (1995) 211:289-295
#title Molecular cloning and posttranscriptional regulation of
macrophage inflammatory protein-1 alpha in alveolar
macrophages.
#cross-references MUID:95298037
#accession I52322
##status preliminary; translated from GB/EMBL/DBJ
##molecule_type mRNA
##residues 1-92 ##label RES
##cross-references EMBL:U22414; NID:g790632; PID:g790633
CLASSIFICATION #superfamily macrophage inflammatory protein
SUMMARY
#length 92 #molecular-weight 10335 #checksum 3184

Query Match 74.7%; Score 74; DB 2; Length 92;
Best Local Similarity 66.7%; Pred. No. 3.12e-03;
Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

```

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Db 71 QICADPKETWVQ 82
QY 1 ELCLDPKENWVQ 12

RESULT 13
ENTRY JC2136
TITLE monocyte chemoattractant protein-1 precursor - pig
ORGANISM #formal_name Sus scrofa domestica #common_name domestic pig
DATE 30-Sep-1993 #sequence_revision 20-Aug-1994 #text_change
17-Mar-1999
ACCESSIONS JC2136; S57498
REFERENCE JC2136
#authors Hosang, K.; Knoke, I.; Klaudiny, J.; Wempe, F.; Wuttke, W.;
Scheit, K.H.
#journal Biochem. Biophys. Res. Commun. (1994) 199:962-968
#title Porcine luteal cells express monocyte chemoattractant
protein-1 (MCP-1): Analysis by polymerase chain reaction
and cDNA cloning.
#cross-references MUID:94183284
#accession JC2136
##molecule_type mRNA
##residues 1-99 ##label HOS
REFERENCE S57497
#authors Zach, O.
#submission submitted to the EMBL Data Library, July 1994
#accession S57498
##status preliminary
##molecule_type mRNA
##residues 1-99 ##label ZAC
##cross-references EMBL:X79416; NID:g872312; PID:g872313
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS glycoprotein
FEATURE
1-23
24-99
#domain signal sequence #status predicted #label SIG\
#product monocyte chemoattractant protein-1 #status
predicted #label MAT\
#binding_site carbohydrate (Asn) (covalent) #status
predicted
SUMMARY
#length 99 #molecular-weight 10976 #checksum 9768
Query Match 74.7%; Score 74; DB 2; Length 99;
Best Local Similarity 58.3%; Pred. No. 3.12e-03;
Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 73 EICADPKKQWVQ 84
QY 1 ELCLDPKENWVQ 12

RESULT 14
ENTRY I50417
TITLE RSV-induced protein - chicken
ORGANISM #formal_name Gallus gallus #common_name chicken
DATE 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change
16-Feb-1997
ACCESSIONS I50417
REFERENCE I50417
#authors Bedard, P.
#journal Proc. Natl. Acad. Sci. U.S.A. (1987) 84:6715-6719
#title Constitutive expression of a gene encoding a polypeptide
homologous to biologically active human platelet protein in
Rous sarcoma virus-transformed fibroblasts virus
transformed fibroblasts.
#cross-references MUID:88016162
#accession I50417
##status preliminary; translated from GB/EMBL/DBJ
##molecule_type mRNA
##residues 1-103 ##label BED
##cross-references GB:J02975; NID:g212643; PID:g212644
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY
#length 103 #molecular-weight 11090 #checksum 8267

```

Query Match 72.7%; Score 72; DB 2; Length 103;
Best Local Similarity 66.7%; Pred. No. 7.83e-03;
Matches 8; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Db 74 EVCLDPTAPWVQ 85
|:|||||
QY 1 ELCLDPKENVVQ 12

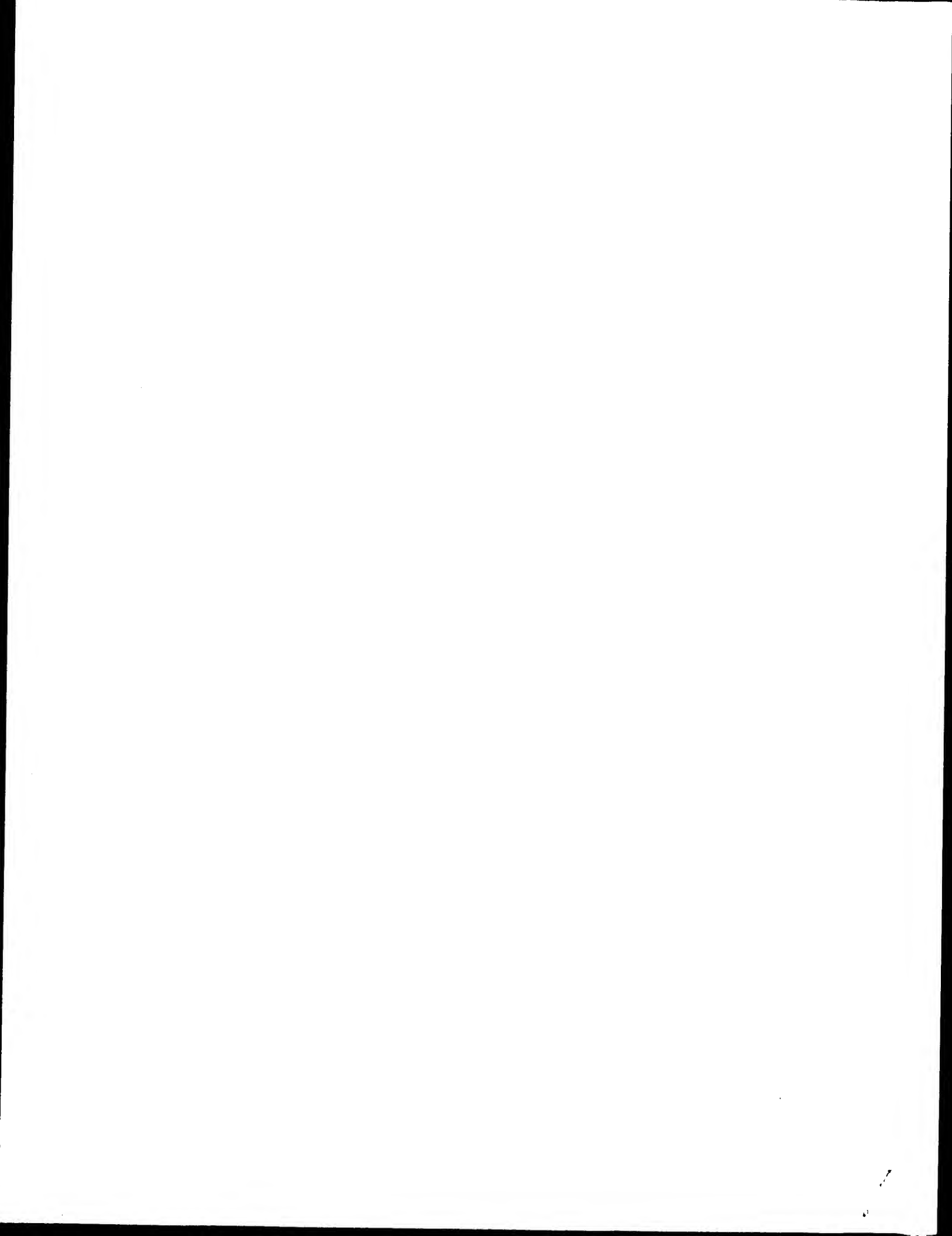
RESULT 15
ENTRY A26736 #type complete
TITLE transformation-induced protein precursor (clone 9E3) -
ORGANISM chicken
DATE #formal_name Gallus gallus #common_name chicken
19-Nov-1988 #sequence_revision 19-Nov-1988 #text_change
20-Mar-1998

ACCESSIONS A26736
REFERENCE A26736
#authors Sugano, S.; Stoeckle, M.Y.; Hanafusa, H.
#journal Cell (1987) 49:321-328
#title Transformation by Rous sarcoma virus induces a novel gene
with homology to a mitogenic platelet protein.
#cross-references MUID:87187628
#accession A26736
#molecule_type mRNA
#residues 1-103 #label SUG
#cross-references GB:M16199; NID:q211735; PID:q211736
CLASSIFICATION #superfamily beta-thromboglobulin
KEYWORDS growth factor
FEATURE 1-17
18-103 #domain signal sequence #status predicted #label SIG\
#product transformation-induced protein #status
predicted #label MAT
SUMMARY #length 103 #molecular-weight 11056 #checksum 8297

Query Match 72.7%; Score 72; DB 2; Length 103;
Best Local Similarity 66.7%; Pred. No. 7.83e-03;
Matches 8; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Db 74 EVCLDPTAPWVQ 85
|:|||||
QY 1 ELCLDPKENVVQ 12

Search completed: Fri Feb 4 17:09:26 2000
Job time : 37 secs.



M P S R L H
(TM)

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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm
Run on: Fri Feb 4 17:08:12 2000; MacPar time 3.54 Seconds
72.129 Million cell updates/sec

Tabular output not generated.

Title: >US-09-150-813-40
Description: (1-12) from US09150813.pgp
Perfect Score: 99
Sequence: 1 ELCLDPKENVWQ 12

Scoring table: PAM 150
Gap 15

Searched: 170751 seqs, 21266608 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: a-geneseq35
1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
14:part14 15:part15 16:part16 17:part17 18:part18
19:part19 20:part20 21:part21 22:part22 23:part23
24:part24 25:part25 26:part26 27:part27 28:part28
29:part29 30:part30 31:part31 32:part32 33:part33
34:part34 35:part35 36:part36 37:part37 38:part38
39:part39

Statistics: Mean 18.854; Variance 67.209; scale 0.281

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description	Pred. No.
1	99	100.0	29	4 R20237	NAF(44-72) peptide in	7.23e-03
2	99	100.0	39	22 W04515	Interleukin-8(34-72)	7.23e-03
3	99	100.0	67	7 R38087	Modified human interl	7.23e-03
4	99	100.0	67	7 R38086	Modified human interl	7.23e-03
5	99	100.0	68	7 R38085	Modified human interl	7.23e-03
6	99	100.0	68	7 R38083	Modified human interl	7.23e-03
7	99	100.0	68	7 R38084	Modified human interl	7.23e-03
8	99	100.0	69	7 R38081	Modified human interl	7.23e-03
9	99	100.0	69	7 R38082	Modified human interl	7.23e-03
10	99	100.0	72	20 R98805	Chemokine-like protei	7.23e-03
11	99	100.0	72	27 W41519	Neutrophil chemotacti	7.23e-03
12	99	100.0	72	26 P81838	Sequence of a synthe	7.23e-03
13	99	100.0	72	23 W25713	Mutant human IL-8, F2	7.23e-03
14	99	100.0	72	23 W25708	Mutant human IL-8, S1	7.23e-03
15	99	100.0	72	23 W25710	Mutant human IL-8, D4	7.23e-03
16	99	100.0	72	23 W25707	Mutant human IL-8, Y1	7.23e-03

17	99	100.0	72	24 W26204	Neutrophil-specific c	7.23e-03
18	99	100.0	72	17 R88057	Human interleukin-8.	7.23e-03
19	99	100.0	72	11 R70183	Soluble interleukin-8	7.23e-03
20	99	100.0	72	20 R98812	Chemokine-like protei	7.23e-03
21	99	100.0	72	1 R03166	Human neutrophil chem	7.23e-03
22	99	100.0	72	20 R98804	Chemokine-like protei	7.23e-03
23	99	100.0	72	23 W25709	Mutant human IL-8, Y4	7.23e-03
24	99	100.0	72	35 W70289	Interleukin-8 soluble	7.23e-03
25	99	100.0	72	23 W25701	Mutant human IL-8, R4	7.23e-03
26	99	100.0	72	22 W04516	Interleukin(1-72) pro	7.23e-03
27	99	100.0	72	23 W25714	Mutant human IL-8, Y1	7.23e-03
28	99	100.0	72	7 R38080	Human interleukin-8 m	7.23e-03
29	99	100.0	72	20 R98803	Chemokine-like protei	7.23e-03
30	99	100.0	72	1 P90913	Sequence of a synthe	7.23e-03
31	99	100.0	72	1 R03615	Human neutrophil chem	7.23e-03
32	99	100.0	72	20 R98806	Chemokine-like protei	7.23e-03
33	99	100.0	73	1 P90078	Human neutrophil acti	7.23e-03
34	99	100.0	73	1 R98817	Chemokine-like protei	7.23e-03
35	99	100.0	73	20 R98816	Chemokine-like protei	7.23e-03
36	99	100.0	73	20 R98814	Interleukin-8.	7.23e-03
37	99	100.0	73	20 R98818	Chemokine-like protei	7.23e-03
38	99	100.0	73	20 R98815	Chemokine-like protei	7.23e-03
39	99	100.0	77	3 R13168	[Ala IL-8]77 leukocy	7.23e-03
40	99	100.0	77	1 P90017	Human neutrophil acti	7.23e-03
41	99	100.0	97	13 R70795	Interleukin-8/NAP-1.	7.23e-03
42	99	100.0	99	1 R05239	Human neutrophil chem	7.23e-03
43	99	100.0	99	2 P93631	Amino acid sequence o	7.23e-03
44	96	97.0	72	23 W25706	Mutant human IL-8, R4	1.48e-02
45	92	92.9	72	23 W25711	Mutant human IL-8, L4	3.81e-02

ALIGNMENTS

RESULT 1
ID R20237 standard; Protein; 29 AA.
AC R20237;
DT 01-MAY-1992 (first entry)
DE NAF(44-72) peptide inhibitor of neutrophil activating factor.
KW bronchitis; neutrophil chemotaxis; ARDS.
OS Synthetic.
PN US079228-A.
PD 07-JAN-1992. 475658.
PF 05-FEB-1990; US-475658.
PR 05-FEB-1990; US-475658.
PA (TEXA) UNIV OF TEXAS SYST.
PI Cohen AB, Miller EJ, Nagao S, Carr FK;
DR WPI, 92-041038/05.
PT New peptide inhibitors of neutrophil activating factor - which inhibit chemotaxis, for treating adult respiratory distress syndrome and other inflammatory lesions caused by NAF

PS Claim 8; Column 9; l1pp; English.
CC NAF(44-72) is a preferred peptide derived from NAF which is antagonistic to NAF and has no chemotactic activity. It inhibited NAF-induced migration by 34 per cent. When used with a second CC preferred peptide, i.e. NAF(3-25) (see R20236) inhibition was 70 per cent.
CC Sequence 29 AA;
SQ

Query Match 100.0%; Score 99; DB 4; Length 29;
Best Local Similarity 100.0%; Pred. No. 7.23e-03;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 5 elcldpkenwvq 16
| | | | | | | | | | | | | | | |
QY 1 ELCLDPKENWVQ 12

RESULT 2
ID W04515 standard; peptide; 39 AA.
AC W04515;
DT 30-JUL-1997 (first entry)
DE Interleukin-8(34-72) used in novel synthesis method.
KW Thioester; synthesis; ligation; catalysis; thiol; condensation;

KW link: beta-aminothioester; bond; amide; production; disulphide;
 OS refeeding; oxidation; interleukin 8; IL-8.
 PN WO9634878-A1.
 PD 07-NOV-1996.
 PF 04-MAY-1995; U05668.
 PR 04-MAY-1995; WO-U05668.
 PA (SCEI) SRIIPPS RES INST.
 PI Dawson PE, Kent SBH, Muir TW;
 DR WPI; 96-506095/50.
 PT Synthesis of protein by chemical ligation of unprotected peptide(s)
 PT - by reaction of N-terminal Cys with C-terminal thioester and
 PT spontaneous rearrangement of intermediate prod.
 PS Example 3; Page 47; 6pp; English.
 CC The present peptide, which has an amino-terminal cysteine residue,
 CC was used in a novel synthesis method, comprising the ligation of a
 CC 1st oligopeptide (OP) to a 2nd OP, end to end, to produce an OP
 CC product. This comprises mixing the 1st and 2nd OP (which have a
 CC carboxy-terminal thioester and an amino-terminal Cys with an
 CC unoxidised SH side chain) in a solution containing a catalytic
 CC thiol, condensing the terminal groups to form an intermediate OP,
 CC in which components are linked by a beta-aminothioester bond and
 CC rearranging the bond to give a product OP linked by an amide bond.
 CC The method can be used for the production of full length proteins,
 CC which can be made into native, disulphide containing proteins by
 CC refolding and oxidation. The method also combines chemoselective,
 CC unprotected, peptide reactions, with native peptide bond formation,
 CC increasing the size of protein that can be made by chemical
 CC synthesis. 39 AA;
 SQ Sequence 39 AA;

Query Match 100.0%; Score 99; DB 22; Length 39;
 Best Local Similarity 100.0%; Pred. No. 7.23e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Db 15 elcldpkenwvq 26
 QY 1 ELCLDPKENWVQ 12

RESULT 3
 ID R38087 standard; protein; 67 AA.
 AC R38087;
 DT 13-OCT-1993 (first entry)
 DE Modified human interleukin-8 analogue (3-69).
 KW Analogues; modified; neutrophil activators; antagonists; human;
 KW competitive antagonist; IL-8; inflammation; treatment; chemotaxis;
 KW activity; stimulation; inflammatory response.
 OS Synthetic.
 PN WO9311159-A.
 PD 10-JUN-1993.
 PF 03-DEC-1992; CA0528.
 PR 04-DEC-1991; US-801578.
 PA (BIOM-) BIOMEDICAL RES CENT LTD.
 PI Clark-Lewis I, Moser B;
 DR WPI; 93-196997/24.
 PT New interleukin-8 analogues modified in specified region - used as
 PT neutrophil activators or for blocking effect of IL-8 on neutrophil(s)
 PT for treatment of inflammation
 PS Claim 23; Page 30; 47pp; English.
 CC The sequence is that of an analogue of interleukin-8 (IL-8) comprising
 CC IL-8 residues 3-69. It is able to bind neutrophils and act as a
 CC competitive antagonist of IL-8, i.e. it can be used to treat
 CC inflammation, e.g. by intravenous injection or oral admin. It can
 CC act as a neutrophil activator and so can be used to stimulate an
 CC inflammatory response.
 SQ Sequence 67 AA;

Query Match 100.0%; Score 99; DB 7; Length 67;
 Best Local Similarity 100.0%; Pred. No. 7.23e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Db 46 elcldpkenwvq 57

QY 1 ELCLDPKENWVQ 12
 |||||
 RESULT 4
 ID R38086 standard; protein; 67 AA.
 AC R38086;
 DT 13-OCT-1993 (first entry)
 DE Modified human interleukin-8 analogue (6-72).
 KW Analogues; modified; neutrophil activators; antagonists; human;
 KW competitive antagonist; IL-8; inflammation; treatment; chemotaxis;
 KW activity; stimulation; inflammatory response.
 OS Synthetic.
 PN WO9311159-A.
 PD 10-JUN-1993.
 PF 03-DEC-1992; CA0528.
 PR 04-DEC-1991; US-801578.
 PA (BIOM-) BIOMEDICAL RES CENT LTD.
 PI Clark-Lewis I, Moser B;
 DR WPI; 93-196997/24.
 PT New interleukin-8 analogues modified in specified region - used as
 PT neutrophil activators or for blocking effect of IL-8 on neutrophil(s)
 PT for treatment of inflammation
 PS Claim 19; Page 29; 47pp; English.
 CC The sequence is that of an analogue of interleukin-8 (IL-8) comprising
 CC IL-8 residues 6-72. It is able to bind neutrophils and act as a
 CC competitive antagonist of IL-8, i.e. it can be used to treat
 CC inflammation, e.g. by intravenous injection or oral admin. It can
 CC act as a neutrophil activator and so can be used to stimulate an
 CC inflammatory response.
 SQ Sequence 67 AA;

Query Match 100.0%; Score 99; DB 7; Length 67;
 Best Local Similarity 100.0%; Pred. No. 7.23e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Db 43 elcldpkenwvq 54
 QY 1 ELCLDPKENWVQ 12

RESULT 5
 ID R38085 standard; protein; 68 AA.
 AC R38085;
 DT 13-OCT-1993 (first entry)
 DE Modified human interleukin-8 analogue (5-72).
 KW Analogues; modified; neutrophil activators; antagonists; human;
 KW competitive antagonist; IL-8; inflammation; treatment; chemotaxis;
 KW activity; stimulation; inflammatory response.
 OS Synthetic.
 PN WO9311159-A.
 PD 10-JUN-1993.
 PF 03-DEC-1992; CA0528.
 PR 04-DEC-1991; US-801578.
 PA (BIOM-) BIOMEDICAL RES CENT LTD.
 PI Clark-Lewis I, Moser B;
 DR WPI; 93-196997/24.
 PT New interleukin-8 analogues modified in specified region - used as
 PT neutrophil activators or for blocking effect of IL-8 on neutrophil(s)
 PT for treatment of inflammation
 PS Claim 17; Page 29; 47pp; English.
 CC The sequence is that of an analogue of interleukin-8 (IL-8) comprising
 CC IL-8 residues 5-72. It is able to bind neutrophils and act as a
 CC competitive antagonist of IL-8, i.e. it can be used to treat
 CC inflammation, e.g. by intravenous injection or oral admin. It can
 CC act as a neutrophil activator and so can be used to stimulate an
 CC inflammatory response. It also has strong chemotaxis activity and
 CC can be used to attract neutrophils to a diseased area.
 SQ Sequence 68 AA;

Query Match 100.0%; Score 99; DB 7; Length 68;
 Best Local Similarity 100.0%; Pred. No. 7.23e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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CC act as a neutrophil activator and so can be used to stimulate an
CC inflammatory response.
SQ Sequence 68 AA;

Query Match 100.0%; Score 99; DB 7; Length 68;
Best Local Similarity 100.0%; Pred. No. 7.23e-03; Indels 0; Gaps 0;
Matches 12; Conservative 0; Mismatches 0;

Db 44 elclldpkenwvq 55
    |||||
QY 1 ELCLDPKENWVQ 12

RESULT 6
ID R38083 standard; protein; 68 AA.
AC R38083;
DE Modified human interleukin-8 analogue Ile5 (6-72).
DE Analogues; modified; neutrophil activators; antagonists; human;
KW competitive antagonist; IL-8; inflammation; treatment; chemotaxis;
KW activity; stimulation; inflammatory response.
OS Synthetic.
FH Key
FT region
FT /note= "Leu5 -> Ile"
PN WO9311159-A.
PD 10-JUN-1993.
PF 03-DEC-1992; CA0528.
PR 04-DEC-1991; US-801578.
PA (BIOM-) BIOMEDICAL RES CENT LTD.
PI Clark-Lewis I, Moser B;
DR WPI; 93-196997/24.
PT New interleukin-8 analogues modified in specified region - used as
PT neutrophil activators or for blocking effect of IL-8 on neutrophil(s)
PT for treatment of inflammation
PS Claim 15; Page 29; 47pp; English.
CC The sequence is that of an analogue of interleukin-8 (IL-8) comprising
CC IL-8 residues Ile5 (6-72). It is able to bind neutrophils and act
CC as a competitive antagonist of IL-8, i.e. it can be used to treat
CC inflammation, e.g. by intravenous injection or oral admin. It can
CC act as a neutrophil activator and so can be used to stimulate an
CC inflammatory response.
SQ Sequence 68 AA;

Query Match 100.0%; Score 99; DB 7; Length 68;
Best Local Similarity 100.0%; Pred. No. 7.23e-03;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 44 elclldpkenwvq 55
    |||||
QY 1 ELCLDPKENWVQ 12

RESULT 7
ID R38084 standard; protein; 68 AA.
AC R38084;
DE Modified human interleukin-8 analogue Gln5 (6-72).
DE Analogues; modified; neutrophil activators; antagonists; human;
KW competitive antagonist; IL-8; inflammation; treatment; chemotaxis;
KW activity; stimulation; inflammatory response.
OS Synthetic.
FH Key
FT region
FT /note= "Leu5 -> Gln"
PN WO9311159-A.
PD 10-JUN-1993.
PF 03-DEC-1992; CA0528.
PR 04-DEC-1991; US-801578.
PA (BIOM-) BIOMEDICAL RES CENT LTD.
PI Clark-Lewis I, Moser B;
DR WPI; 93-196997/24.
PT New interleukin-8 analogues modified in specified region - used as
PT neutrophil activators or for blocking effect of IL-8 on neutrophil(s)
PT for treatment of inflammation
PS Claim 16; Page 29; 47pp; English.
CC The sequence is that of an analogue of interleukin-8 (IL-8) comprising
CC IL-8 residues Gln5 (6-72). It is able to bind neutrophils and act
CC as a competitive antagonist of IL-8, i.e. it can be used to treat
CC inflammation, e.g. by intravenous injection or oral admin. It can

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CC act as a neutrophil activator and so can be used to stimulate an
CC inflammatory response.
SQ Sequence 68 AA;

Query Match 100.0%; Score 99; DB 7; Length 68;
Best Local Similarity 100.0%; Pred. No. 7.23e-03; Indels 0; Gaps 0;
Matches 12; Conservative 0; Mismatches 0;

Db 44 elclldpkenwvq 55
    |||||
QY 1 ELCLDPKENWVQ 12

RESULT 8
ID R38081 standard; protein; 69 AA.
AC R38081;
DE Modified human interleukin-8 analogue (4-72).
DE Analogues; modified; neutrophil activators; antagonists; human;
KW competitive antagonist; IL-8; inflammation; treatment; chemotaxis;
KW activity; stimulation; inflammatory response.
OS Synthetic.
PN WO9311159-A.
PD 10-JUN-1993.
PF 03-DEC-1992; CA0528.
PR 04-DEC-1991; US-801578.
PA (BIOM-) BIOMEDICAL RES CENT LTD.
PI Clark-Lewis I, Moser B;
DR WPI; 93-196997/24.
PT New interleukin-8 analogues modified in specified region - used as
PT neutrophil activators or for blocking effect of IL-8 on neutrophil(s)
PT for treatment of inflammation
PS Claim 9; Page 29; 47pp; English.
CC The sequence is that of an analogue of interleukin-8 (IL-8) comprising
CC IL-8 residues 4-72. It is able to bind neutrophils and act as a
CC competitive antagonist of IL-8, i.e. it can be used to treat
CC inflammation, e.g. by intravenous injection or oral admin. It can
CC act as a neutrophil activator and so can be used to stimulate an
CC inflammatory response.
SQ Sequence 69 AA;

Query Match 100.0%; Score 99; DB 7; Length 69;
Best Local Similarity 100.0%; Pred. No. 7.23e-03;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 45 elclldpkenwvq 56
    |||||
QY 1 ELCLDPKENWVQ 12

RESULT 9
ID R38082 standard; protein; 69 AA.
AC R38082;
DE Modified human interleukin-8 analogue Ala4Ala5 (6-72).
DE Analogues; modified; neutrophil activators; antagonists; human;
KW competitive antagonist; IL-8; inflammation; treatment; chemotaxis;
KW activity; stimulation; inflammatory response.
OS Synthetic.
FH Key
FT region
FT /note= "Glu4 -> Ala"
FT region
FT /note= "Leu5 -> Ala"
PN WO9311159-A.
PD 10-JUN-1993.
PF 03-DEC-1992; CA0528.
PR 04-DEC-1991; US-801578.
PA (BIOM-) BIOMEDICAL RES CENT LTD.
PI Clark-Lewis I, Moser B;
DR WPI; 93-196997/24.
PT New interleukin-8 analogues modified in specified region - used as
PT neutrophil activators or for blocking effect of IL-8 on neutrophil(s)

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PT for treatment of inflammation
 PS Claim 10; Page 29; 47pp; English.
 CC The sequence is that of an analogue of interleukin-8 (IL-8) comprising
 CC IL-8 residues Ala4Ala5 (6-72). It is able to bind neutrophils and act
 CC as a competitive antagonist of IL-8, i.e. it can be used to treat
 CC inflammation, e.g. by intravenous injection or oral admin. It can
 CC act as a neutrophil activator and so can be used to stimulate an
 CC inflammatory response.
 SQ Sequence 69 AA;

Query Match 100.0%; Score 99; DB 7; Length 69;
 Best Local Similarity 100.0%; Pred. No. 7.23e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 45 elcldpkenwvq 56
 |||||
 QY 1 ELCLDPKENWVQ 12

RESULT 10
 ID R99805 standard; peptide; 72 AA.
 AC R99805;
 DT 22-MAR-1997 (first entry)
 DE Chemokine-like protein IL-8M8.
 KW Human; chemokine; IL-8M8; Interleukin-8; mutant; active domain;
 KW Interleukin-8-antagonist; myelosuppressive; cytostatic; antitumour;
 KW leukaemia; polycythaemia vera; hypermakiaryocytopenias; therapy;
 KW diagnostic; myeloid progenitor cell; expansion;
 KW bone marrow transplantation.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT active_site 4..6
 FT misc_difference 7 /note= "Mutated active domain (R99826, claim 5)"
 FT misc_difference 9 /note= "Conserved Cys residue"
 FT active_site 24..27 /note= "Conserved Cys residue"
 FT domain 24..33 /note= "Interleukin-8 active domain (R92319, claim 30)"
 FT misc_difference 34 /note= "Conserved sequence (R99824, claim 1)"
 FT misc_difference 50 /note= "Conserved Cys residue"
 FT /note= "Conserved Cys residue"
 WO9613587-A1.
 09-MAY-1996.
 26-OCT-1995; U13897.
 26-OCT-1994; US-330163.
 07-JUN-1995; US-482111.
 (REPK) REPLIGEN CORP.
 PI Daly TJ, Larosa GJ;
 DR WPI: 96-239500/24.
 DR N-PSDB: T30203.
 Chemokine-like proteins with active domains from different
 PT chemokine(s) - provide modified activities, which exhibit high
 PT myelo-suppressive activity
 PS Claim 6; Page 78; 115pp; English.
 CC This is a novel chemokine-like protein (IL-8M8), based on
 CC interleukin-8 (IL-8), with 4 conserved cysteine residues. The
 CC protein has been modified to include a mutation in the 1st
 CC active domain, to give ELQ (R99826) instead of wild-type IL-8
 CC sequence ELR (R99828, claim 10) before the 1st Cys residue, and
 CC contains the IL-8 2nd active domain ELRV (R92319, part of R99824),
 CC before the 3rd Cys residue. A version with an N-terminal Met residue
 CC is given in R99816. The sequence has been derived by mutagenesis of
 CC wild-type IL-8 (R99814). The active domains are required for
 CC myelosuppressive activity. The novel chemokine shows similar
 CC activity to the wild-type, and may be used as an interleukin-8-
 CC antagonist to enhance myeloid cell proliferation, as an adjunctive
 CC agent in chemotherapy or radiation therapy, in therapy of myelogenous
 CC leukaemia, polycythaemia vera or hypermegakaryocytopenic disorders,

CC or to detect, isolate and expand progenitor cells ex vivo for
 CC transplantation. The protein does not show adverse neutrophil
 CC activation or inflammatory side-effects.
 SQ Sequence 72 AA;

Query Match 100.0%; Score 99; DB 20; Length 72;
 Best Local Similarity 100.0%; Pred. No. 7.23e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 elcldpkenwvq 59
 |||||
 QY 1 ELCLDPKENWVQ 12

RESULT 11
 ID W41519 standard; peptide; 72 AA.
 AC W41519;
 DT 14-APR-1998 (first entry)
 DE Neutrophil chemotactic factor amino-terminal peptide.
 KW Antibody; monoclonal; neutrophil chemotactic factor;
 KW amino-terminal; quantification; detection; localisation;
 KW treatment; inflammation.
 OS Synthetic.
 PN US5698196-A.
 PD 16-DEC-1997.
 PF 06-JUN-1995; 467612.
 PR 16-MAR-1988; US-169033.
 PR 06-JUN-1995; US-467612.
 PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
 PI Appella E, Leonard EJ, Matsushima K, Oppenheim J,
 PI Showalter SD, Yoshimura T;
 DR WPI: 98-051432/05.
 PT Anti-neutrophil chemotactic factor antibody - useful to assay for
 PT factor and treat inflammation
 PS Claim 1; Column 4; 8pp; English.
 CC A novel antibody, preferably a monoclonal Ab (MAB), has specific
 CC binding affinity for a neutrophil chemotactic factor (NCF) having
 CC the present amino-terminal sequence. The MAB can be used to
 CC quantify, detect or localise the NCF in a sample, and treat
 CC inflammatory conditions.
 SQ Sequence 72 AA;

Query Match 100.0%; Score 99; DB 27; Length 72;
 Best Local Similarity 100.0%; Pred. No. 7.23e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 elcldpkenwvq 59
 |||||
 QY 1 ELCLDPKENWVQ 12

RESULT 12
 ID P81838 standard; peptide; 72 AA.
 AC P81838;
 DT 07-NOV-1990 (first entry)
 DE Sequence of a synthetic neutrophil chemotactic polypeptide (NCF)
 KW Inflammation; anti-neutrophil chemotactic polypeptide antibody.
 PN US7169033-A.
 PD 27-SEP-1988.
 PF 16-MAR-1988; 169033.
 PR 16-MAR-1988; US-169033.
 PA (USSH) US DEPT HEALTH & HUMAN.
 PI Matsushima K, Hoshimura T, Leonard EJ, Oppenheim L, Appella E,
 PI Showalter SD;
 DR WPI: 88-322571/45.
 PT Synthetic neutrophil chemo-tactic factor -
 PT and its monoclonal antibodies useful for treating inflammatory
 PT conditions
 PS Claim 1; Page 8; 11pp; English.
 CC The claimed NCF is composed in whole or in part of the AA sequence in
 CC P90913. Anti-NCF MABs are useful for treating inflammatory
 CC conditions.
 SQ Sequence 72 AA;


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Query Match      100.0%; Score 99; DB 26; Length 72;
Best Local Similarity 100.0%; Pred. No. 7.23e-03;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 elcldpkenwvq 59
| | | | | | | | | |
QY 1 ELCLDPKENWVQ 12

RESULT 13
ID W25713 standard; protein; 72 AA.
AC W25713;
DT 17-OCT-1997 (first entry)
DE Mutant human IL-8, F21N.
KW Interleukin-8; IL-8; IL-8 receptor-mediated biological response;
KW mutant; IL-8 receptor; overlap PCR.
OS Homo sapiens. Location/Qualifiers
FH Key misc_difference 21 /label= F21N
FT W09700601-A2.
PN 09-JAN-1997.
PD 18-JUN-1996; U10537.
PF 05-APR-1996; US-628455.
PR 20-JUN-1995; US-002774.
PR 18-OCT-1995; US-005385.
PA (CHIR ) CHIRON CORP.
PI Blaney J, Shyamala V, Siani M, Tekamp-Olson P;
PI Wernette-Hammond ME;
DR WPI: 97-087095/08.
PT New mutant interleukin-8 poly:peptide(s) - used for modulating
PT interleukin-8 receptor-mediated biological responses.
PS Claim 1; Page 35; 40pp; English.
CC The sequences given in W25701-14 represent interleukin-8 (IL-8)
CC mutants which are capable of binding to IL-8 receptors. They can
CC be used for modulating an IL-8 receptor-mediated biological response.
CC The mutations were introduced into the human IL-8 coding sequence by
CC overlap PCR.
CC overlap PCR.
SQ Sequence 72 AA;

Query Match      100.0%; Score 99; DB 23; Length 72;
Best Local Similarity 100.0%; Pred. No. 7.23e-03;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 elcldpkenwvq 59
| | | | | | | | | |
QY 1 ELCLDPKENWVQ 12

RESULT 14
ID W25708 standard; protein; 72 AA.
AC W25708;
DT 17-OCT-1997 (first entry)
DE Mutant human IL-8, S14Q.
KW Interleukin-8; IL-8; IL-8 receptor-mediated biological response;
KW mutant; IL-8 receptor; overlap PCR.
OS Homo sapiens. Location/Qualifiers
FH Key misc_difference 14 /label= S14Q
FT W09700601-A2.
PN 09-JAN-1997.
PD 18-JUN-1996; U10537.
PF 05-APR-1996; US-628455.
PR 20-JUN-1995; US-002774.
PR 18-OCT-1995; US-005385.
PA (CHIR ) CHIRON CORP.
PI Blaney J, Shyamala V, Siani M, Tekamp-Olson P;
PI Wernette-Hammond ME;
DR WPI: 97-087095/08.
PT New mutant interleukin-8 poly:peptide(s) - used for modulating
PT interleukin-8 receptor-mediated biological responses.

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PS Claim 1; Page 35; 40pp; English.
CC The sequences given in W25701-14 represent interleukin-8 (IL-8)
CC mutants which are capable of binding to IL-8 receptors. They can
CC be used for modulating an IL-8 receptor-mediated biological response.
CC The mutations were introduced into the human IL-8 coding sequence by
CC overlap PCR.
SQ Sequence 72 AA;

Query Match      100.0%; Score 99; DB 23; Length 72;
Best Local Similarity 100.0%; Pred. No. 7.23e-03;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 elcldpkenwvq 59
| | | | | | | | | |
QY 1 ELCLDPKENWVQ 12

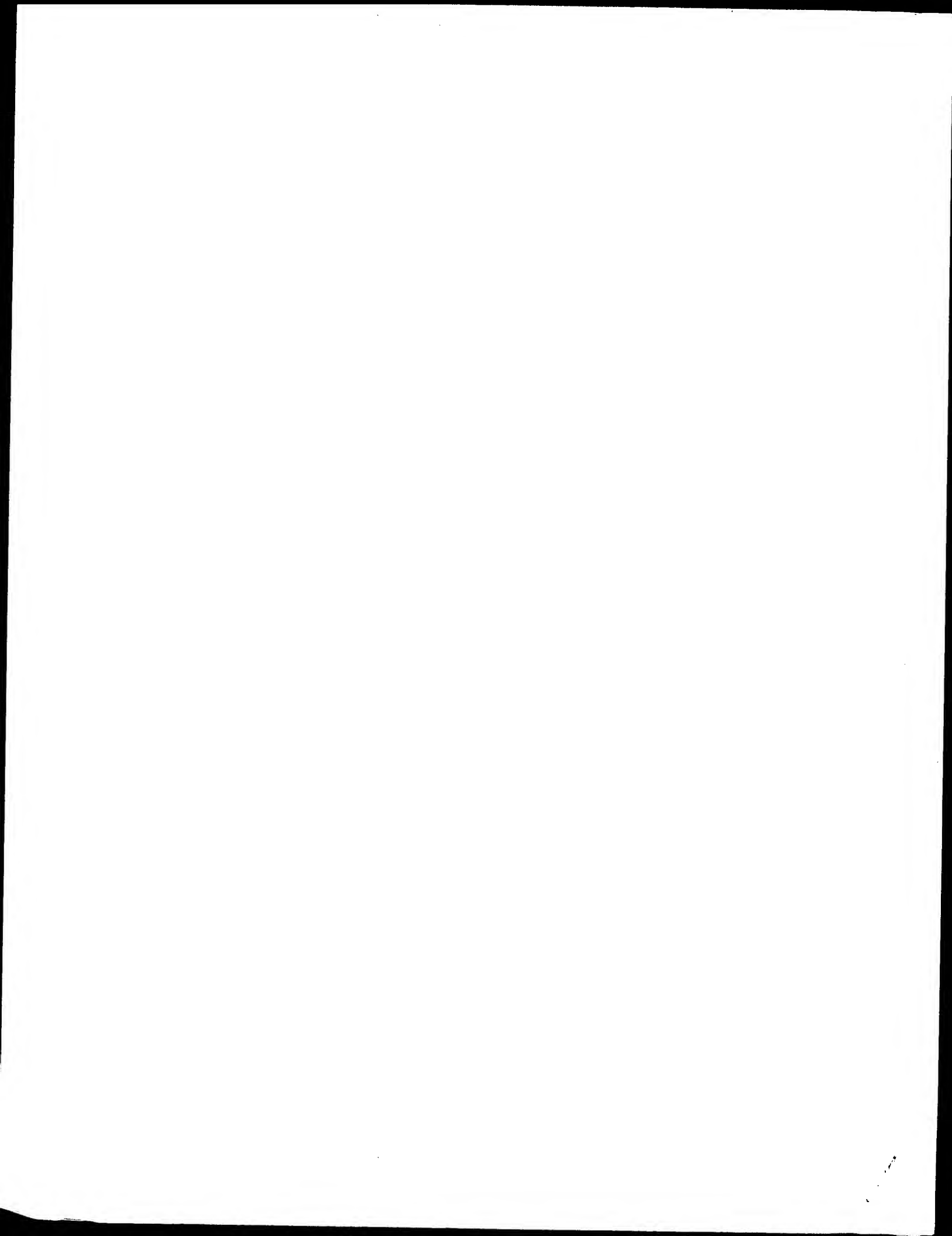
RESULT 15
ID W25710 standard; protein; 72 AA.
AC W25710;
DT 17-OCT-1997 (first entry)
DE Mutant human IL-8, D45R.
KW Interleukin-8; IL-8; IL-8 receptor-mediated biological response;
KW mutant; IL-8 receptor; overlap PCR.
OS Homo sapiens. Location/Qualifiers
FH Key misc_difference 45 /label= D45R
FT W09700601-A2.
PN 09-JAN-1997.
PD 18-JUN-1996; U10537.
PF 05-APR-1996; US-628455.
PR 20-JUN-1995; US-002774.
PR 18-OCT-1995; US-005385.
PA (CHIR ) CHIRON CORP.
PI Blaney J, Shyamala V, Siani M, Tekamp-Olson P;
PI Wernette-Hammond ME;
DR WPI: 97-087095/08.
PT New mutant interleukin-8 poly:peptide(s) - used for modulating
PT interleukin-8 receptor-mediated biological responses.
PS Claim 1; Page 35; 40pp; English.
CC The sequences given in W25701-14 represent interleukin-8 (IL-8)
CC mutants which are capable of binding to IL-8 receptors. They can
CC be used for modulating an IL-8 receptor-mediated biological response.
CC The mutations were introduced into the human IL-8 coding sequence by
CC overlap PCR.
SQ Sequence 72 AA;

Query Match      100.0%; Score 99; DB 23; Length 72;
Best Local Similarity 100.0%; Pred. No. 7.23e-03;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 elcldpkenwvq 59
| | | | | | | | | |
QY 1 ELCLDPKENWVQ 12

Search completed: Fri Feb 4 17:08:32 2000
Job time : 20 secs.

```



 W P E R L H
 (TM)

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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 17:15:49 2000; MasPar time 3.23 Seconds
 Tabular output not generated. 105.016 Million cell updates/sec

Title: >US-09-150-813-41
 Description: (1-12) from US09150813.ppe
 Perfect Score: 92
 Sequence: 1 EICLDPEAPFLK 12

Scoring table: PAM 150
 Gap 15

Searched: 77977 seqs, 28268293 residues

Post-processing: Minimum Match 0%
 Listing first 45 summaries

Database: swiss-prot37
 1:swissprot

Statistics: Mean 25.651; Variance 29.190; scale 0.879

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description	Pred. No.
1	92	100.0	114	1	EN78_HUMAN NEUTROPHIL ACTIVATING	3.75e-10
2	87	94.6	114	1	GCP2_HUMAN GRANULOCYTE CHEMOTACTI	9.29e-09
3	74	80.4	75	1	GCP2_BOVIN GRANULOCYTE CHEMOTACTI	2.78e-05
4	70	76.1	132	1	LIX_MOUSE CYTOKINE LIX PRECURSOR	2.90e-04
5	67	72.8	117	1	AMC2_PIG ALVEOLAR MACROPHAGE CH	1.61e-03
6	66	71.7	130	1	LIX_RAT CYTOKINE LIX PRECURSOR	2.83e-03
7	63	68.5	100	1	MP2_RAT MACROPHAGE INFLAMMATOR	1.49e-02
8	63	68.5	119	1	PF4L_PIG PLATELET BASIC PROTEIN	1.49e-02
9	63	68.5	1524	1	V133_HUMAN HYPOTHETICAL PROTEIN K	1.49e-02
10	62	67.4	98	1	GROG_BOVIN GROWTH REGULATED PROTE	2.57e-02
11	62	67.4	128	1	PF4L_HUMAN PLATELET BASIC PROTEIN	2.57e-02
12	62	67.4	225	1	DEOC_SYNY3 DEOXYRIBOSE-PHOSPHATE	2.57e-02
13	60	65.2	68	1	MT2A_RAT MACROPHAGE INFLAMMATOR	7.50e-02
14	60	65.2	96	1	GRO_MOUSE MACROPHAGE INFLAMMATOR	7.50e-02
15	60	65.2	100	1	MT2B_RAT MACROPHAGE INFLAMMATOR	7.50e-02
16	60	65.2	104	1	GROA_BOVIN GROWTH REGULATED PROTE	7.50e-02
17	60	65.2	104	1	GROB_BOVIN GROWTH REGULATED PROTE	7.50e-02
18	60	65.2	104	1	GRO_MOUSE GROWTH REGULATED PROTE	7.50e-02
19	59	64.0	599	1	YQAQ_SCHPO GROWTH REGULATED PROTE	2.14e-01
20	58	63.0	96	1	GRO_RAT GROWTH REGULATED PROTE	2.14e-01
21	58	63.0	104	1	GRO_CAVPO GROWTH REGULATED PROTE	2.14e-01
22	58	63.0	104	1	GRO2_RABIT GROWTH REGULATED PROTE	2.14e-01
23	58	63.0	111	1	Y06R_BPT4 HYPOTHETICAL 13.1 KD P	2.14e-01

24	57	62.0	103	1	EMF1_CHICK	3.59e-01
25	57	62.0	167	1	NS3_SIDEV PROBABLE NONSTRUCTURAL	3.59e-01
26	57	62.0	310	1	ADP-L-GLYCERO-D-MANNNO-	3.59e-01
27	57	62.0	310	1	ADP-L-GLYCERO-D-MANNNO-	3.59e-01
28	56	60.9	277	1	PHOTCSYSTEM II MANGANE	5.97e-01
29	56	60.9	1459	1	PROCOLLAGEN ALPHA 1(I)	5.97e-01
30	55	59.8	101	1	GRO_CRIGR GROWTH REGULATED PROTE	9.87e-01
31	55	59.8	219	1	DEOC_AQUAE DEOXYRIBOSE-PHOSPHATE	9.87e-01
32	54	58.7	402	1	YXAH_BACSU HYPOTHETICAL 46.2 KD P	1.62e+00
33	53	57.6	181	1	YIEP_ECOLI HYPOTHETICAL 20.8 KD P	2.65e+00
34	53	57.6	1001	1	DIS3_YEAST DIS3 PROTEIN	4.29e+00
35	52	56.5	273	1	PSBO_ANASP PHOTOSYSTEM II MANGANE	4.29e+00
36	52	56.5	730	1	CADF_MOUSE MUSCLE-CADHERIN PRECUR	4.29e+00
37	52	56.5	814	1	CADF_HUMAN MUSCLE-CADHERIN PRECUR	4.29e+00
38	52	56.5	1139	1	MA2X_HUMAN ALPHA-MANNOSIDASE IIX	4.29e+00
39	51	55.4	101	1	IL8_CERTO INTERLEUKIN-8 PRECURSO	6.91e+00
40	51	55.4	101	1	IL8_MACMU INTERLEUKIN-8 PRECURSO	6.91e+00
41	51	55.4	107	1	GRO_HUMAN GROWTH REGULATED PROTE	6.91e+00
42	51	55.4	147	1	YBAK_BACSU HYPOTHETICAL 17.6 KD P	6.91e+00
43	51	55.4	308	1	RFAD_HAEIN ADP-L-GLYCERO-D-MANNNO-	6.91e+00
44	50	54.3	85	1	PLF4_SHEEP PLATELET FACTOR 4 (PF-	1.10e+01
45	50	54.3	1187	1	TYK2_HUMAN NON-RECEPTOR TYROSINE-	1.10e+01

ALIGNMENTS

RESULT 1
 ID EN78_HUMAN STANDARD; PRT; 114 AA.
 AC P42830;
 DT 01-NOV-1995 (REL. 32, CREATED)
 DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
 DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
 DE NEUTROPHIL ACTIVATING PROTEIN ENA-78 PRECURSOR.
 GN SCYB5 OR ENA78.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 95129887.
 RA POWER C.A., FURNESS R.B., BRAWAND C., WELLS T.N.C.;
 RT "Cloning of a full-length cDNA encoding the neutrophil-activating
 peptide ENA-78 from human platelets.";
 RL GENE 151:333-334(1994).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 95014315.
 RA CHANG M.S., MCNINCH J., BASU R., SIMONET S.;
 RT "Cloning and characterization of the human neutrophil-activating
 peptide (ENA-78) gene";
 RL J. BIOL. CHEM. 269:25277-25282(1994).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 95091791.
 RA CORRETT M.S., SCHMITT I., RIESS O., WALZ A.;
 RT "Characterization of the gene for human neutrophil-activating peptide
 78 (ENA-78).";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 205:612-617(1994).
 RN [4]
 RP SEQUENCE OF 43-114 FROM N.A.
 RX TISSUE-EPITHELIIUM;
 RX MEDLINE; 92078844.
 RA WALZ A., BURGNER R., CAR B., BAGGIOLINI M., KUNKEL S.L.,
 RT "Structure and neutrophil-activating properties of a novel
 inflammatory peptide (ENA-78) with homology to interleukin 8.";
 RL J. EXP. MED. 174:1355-1362(1991).
 CC -!- FUNCTION: INVOLVED IN NEUTROPHIL ACTIVATION.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 C-X-C) (CHEMOKINE CXC).

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DR EMBL; X78686; G471243; -;
 DR EMBL; L37036; G607031; -;
 DR EMBL; U12709; G684922; -;
 DR MIM; 600324; -;
 DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSP; P02775; INAP.
 KW CYTOKINE; SIGNAL.
 FT SIGNAL 1 ? POTENTIAL.
 FT CHAIN ? 114 NEUTROPHIL ACTIVATING PROTEIN ENA-78.
 FT DISULFID 49 75 BY SIMILARITY.
 FT DISULFID 51 91 BY SIMILARITY.
 SQ SEQUENCE 114 AA; 11972 MW; 390290D2 CRC32;

Query Match 100.0%; Score 92; DB 1; Length 114;
 Best Local Similarity 100.0%; Pred. No. 3.75e-10;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 89 EICLDPPEAPFLK 100
 :::::::::::
 QY 1 EICLDPPEAPFLK 12

RESULT 2
 ID GCP2_HUMAN STANDARD; PRT; 114 AA.
 AC P80162;
 DT 01-APR-1993 (REL. 25, CREATED)
 DT 15-JUL-1998 (REL. 36, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DE GRANULOCYTE CHEMOTACTIC PROTEIN 2 PRECURSOR (GCP-2).
 GN SCYB6 OR GCP2.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
 [1]
 RA ROYAL L.E., HERSCHMAN H.R., SMITH J.B.;
 RN SUBMITTED (APR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 [2]
 RP SEQUENCE OF 38-114 FROM N.A.
 RA FROYEN G., PROOST P., RONASE I., MITERA T., HAELENS A., WUYTS A.,
 RA OPDENAKKER G., VAN DAMME J., BILLIAU A.;
 RL SUBMITTED (JAN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 [3]
 RN SEQUENCE OF 38-112.
 RP TISSUE-OSTEOSARCOMA;
 RX MEDLINE; 94001982.
 RA PROOST P., WUYTS A., CONINGS R., LENAERTS J.-P., BILLIAU A.,
 RA OPDENAKKER G., VAN DAMME J.;
 RT "Human and bovine granulocyte chemotactic protein-2: complete amino
 FT acid sequence and functional characterization as chemokines.";
 RL BIOCHEMISTRY 32:10170-10177(1993).
 [4]
 RN SEQUENCE OF 38-57.
 RP TISSUE-OSTEOSARCOMA;
 RX MEDLINE; 93139469.
 RA PROOST P., DE WOLF-PETERS C., CONINGS R., OPDENAKKER G., BILLIAU A.,
 RA VAN DAMME J.;
 RT "Identification of a novel granulocyte chemotactic protein (GCP-2)
 RT from human tumor cells. In vitro and in vivo comparison with natural
 RT forms of GRO, IP-10, and IL-8";
 RL J. IMMUNOL. 150:1000-1010(1993).
 CC -!- FUNCTION: CHEMOTACTIC FOR NEUTROPHIL GRANULOCYTES.
 CC -!- SUBCELLULAR LOCATION: SECRETED.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXC).
 CC

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DR EMBL; U83303; G1916230; -;
 DR EMBL; Y08770; E283124; -;
 DR PIR; A54188; A54188.
 DR MIM; 138965; -;
 DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSP; P10889; IMI2.
 KW CYTOKINE; CHEMOTAXIS; HEPARIN-BINDING; SIGNAL.
 FT SIGNAL 1 37 POTENTIAL.
 FT CHAIN 38 114 GRANULOCYTE CHEMOTACTIC PROTEIN 2.
 FT VARIANT 38 39 MISSING (N-TERMINAL PROCESSING VARIANT).
 FT VARIANT 38 42 MISSING (N-TERMINAL PROCESSING VARIANT).
 FT VARIANT 38 45 MISSING (N-TERMINAL PROCESSING VARIANT).
 FT DISULFID 49 75 BY SIMILARITY.
 FT DISULFID 51 91 BY SIMILARITY.
 SQ SEQUENCE 114 AA; 11897 MW; 4AC10E5C CRC32;

Query Match 94.6%; Score 87; DB 1; Length 114;
 Best Local Similarity 83.3%; Pred. No. 9.29e-09;
 Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 89 QVCLDPEAPFLK 100
 :::::::::::
 QY 1 EICLDPPEAPFLK 12

RESULT 3
 ID GCP2_BOVIN STANDARD; PRT; 75 AA.
 AC P80221;
 DT 01-FEB-1994 (REL. 28, CREATED)
 DT 01-FEB-1994 (REL. 28, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DE GRANULOCYTE CHEMOTACTIC PROTEIN 2 (GCP-2).
 GN SCYB6 OR GCP2.
 OS BOS TAURUS (BOVINE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC ARTIODACTYLA; RUMINANTIA; PECORA; BOVIDAE; BOVINAE; BOS.
 [1]
 RP SEQUENCE.
 RC TISSUE-KIDNEY;
 RX MEDLINE; 94001982.
 RA PROOST P., WUYTS A., CONINGS R., LENAERTS J.-P., BILLIAU A.,
 RA OPDENAKKER G., VAN DAMME J.;
 RT "Human and bovine granulocyte chemotactic protein-2: complete amino
 RT acid sequence and functional characterization as chemokines.";
 RL BIOCHEMISTRY 32:10170-10177(1993).
 CC -!- FUNCTION: CHEMOTACTIC FOR NEUTROPHIL GRANULOCYTES.
 CC -!- SUBCELLULAR LOCATION: SECRETED.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXC).
 DR PIR; B54188; B54188.
 DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSP; P02775; INAP.
 KW CYTOKINE; CHEMOTAXIS; HEPARIN-BINDING.
 FT VARIANT 1 2 MISSING (N-TERMINAL PROCESSING VARIANT).
 FT VARIANT 1 7 MISSING (N-TERMINAL PROCESSING VARIANT).
 FT VARIANT 1 8 MISSING (N-TERMINAL PROCESSING VARIANT).
 FT VARIANT 1 9 MISSING (N-TERMINAL PROCESSING VARIANT).
 FT DISULFID 12 38 BY SIMILARITY.
 FT DISULFID 14 54 BY SIMILARITY.
 SQ SEQUENCE 75 AA; 7931 MW; B747167F CRC32;

Query Match 80.4%; Score 74; DB 1; Length 75;
 Best Local Similarity 75.0%; Pred. No. 2.78e-05;

Matches 9; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 52 EVCLDPEAPLIK 63
|:|||||:|
Qy 1 EICLDPEAPFLK 12

RESULT 4
ID LIX_MOUSE STANDARD; PRT; 132 AA.

AC P50228;
DT 01-OCT-1996 (REL. 34, CREATED)
DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE CYTOKINE LIX PRECURSOR.
GN SCYB5
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 95348101.

RA SMITH J.B., HERSCHMAN H.R.;
RT "Glucocorticoid-attenuated response genes encode intercellular
mediators, including a new C-X-C chemokine.";
RL J. BIOL. CHEM. 270:16756-16765(1995).
CC -!- FUNCTION: MAY PARTICIPATE IN THE RECRUITMENT OF INFLAMMATORY CELLS
CC BY INJURED OR INFECTED TISSUE.
CC -!- INDUCTION: BY LIPOPOLYSACCHARIDE (LPS).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CXCL).

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CC
CC EMBL; M99368; G164326;
CC PIR; B44253; B44253.
CC PIR; B39819; B39819.
CC PROSITE; P500471; SMALL_CYTOKINES_CXC; 1.
CC PFAM; PF00048; i18; 1.
CC HSSP; P02775; 1NAP.
CC CYTOKINE; SIGNAL. 40
CC CHAIN 41 132
CC SIGNAL 41 132
CC POTENTIAL. CYTOKINE LIX.
CC BY SIMILARITY.
CC BY SIMILARITY.
CC BY SIMILARITY.
CC SIGNAL 55 95
CC SEQUENCE 132 AA; 14190 MW; 58C45B6B CRC32;
Query Match 76.18; Score 70; DB 1; Length 132;
Best Local Similarity 75.08; Pred. No. 2.90e+04;
Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 93 EVCLDPEAPVIX 104
|:|||||:|
Qy 1 EICLDPEAPFLK 12

RESULT 5
ID AMC2_PIG STANDARD; PRT; 117 AA.

AC P22952;
DT 01-AUG-1991 (REL. 19, CREATED)
DT 01-JUL-1993 (REL. 26, LAST SEQUENCE UPDATE)
DT 01-JUL-1993 (REL. 26, LAST ANNOTATION UPDATE)
DE ALVEOLAR MACROPHAGE CHEMOTACTIC FACTOR II PRECURSOR (AMCF-II).
OS SUS SCROFA (PIG).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC ARTIODACTYLA; SUIFORMES; SUINA; SUIDAE; SUS.
RN [1]
RP SEQUENCE FROM N.A., AND SEQUENCE OF 37-66.
RC TISSUE=LUNG;

RA MEDLINE; 930411741.
RA GOODMAN R.B., FOSTER D.C., MATHEWS S.L., OSBORN S.G., KUIJPER J.L.,
FORSTROM J.W., MARTIN T.R.;
RT "Molecular cloning of porcine alveolar macrophage-derived neutrophil
chemotactic factors I and II; Identification of porcine IL-8 and
another intercrine-alpha protein.";
RL BIOCHEMISTRY 31:10483-10490(1992).
RN [2]
RP SEQUENCE OF 37-66.
RX STRAIN=YORKSHIRE;
RC MEDLINE; 91217086.
RA GOODMAN R.B., FORSTROM J.W., OSBORN S.G., CHI E.Y., MARTIN T.R.;
RT "Identification of two neutrophil chemotactic peptides produced by
porcine alveolar macrophages.";
RL J. BIOL. CHEM. 266:8455-8463(1991).
CC -!- FUNCTION: HAS CHEMOTACTIC ACTIVITY FOR PORCINE, AND IN A LESSER
CC EXTENT, FOR HUMAN NEUTROPHILS.
CC -!- TISSUE SPECIFICITY: ALVEOLAR MACROPHAGES.
CC -!- INDUCTION: BY LIPOPOLYSACCHARIDE.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CXCL).

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CC
CC EMBL; M99368; G164326;
CC PIR; B44253; B44253.
CC PIR; B39819; B39819.
CC PROSITE; P500471; SMALL_CYTOKINES_CXC; 1.
CC PFAM; PF00048; i18; 1.
CC HSSP; P02775; 1NAP.
CC CYTOKINE; CHEMOTACTIC; INFLAMMATORY RESPONSE; SIGNAL.
CC SIGNAL 1 36
CC CHAIN 37 117
CC ALVEOLAR MACROPHAGE CHEMOTACTIC FACTOR
CC II.
CC BY SIMILARITY.
CC BY SIMILARITY.
CC BY SIMILARITY.
CC SEQUENCE 117 AA; 12343 MW; 9C31EF8E CRC32;
Query Match 72.88; Score 67; DB 1; Length 117;
Best Local Similarity 66.78; Pred. No. 1.61e+03;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 92 EVCLDPEAPLIK 103
|:|||||:|
Qy 1 EICLDPEAPFLK 12

RESULT 6
ID LIX_RAT STANDARD; PRT; 130 AA.

AC P97885;
DT 01-NOV-1997 (REL. 35, CREATED)
DT 01-NOV-1997 (REL. 35, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE CYTOKINE LIX PRECURSOR.
GN SCYB5.
OS RATTUS NORVEGICUS (RAT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=SPRAGUE-DAWLEY;
RA KELLNER G.S., MACIEJEWSKI-LENOIR D., LEE E.D., MAKI R.A.;
RL SUBMITTED (FEB-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -!- FUNCTION: MAY PARTICIPATE IN THE RECRUITMENT OF INFLAMMATORY CELLS
CC BY INJURED OR INFECTED TISSUE (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CXCL).

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DR EMBL; U90448; G1899248; -
 DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 DR PFAM; PF00048; I18; 1.
 DR HSSP; P10889; I1M12.
 KW CYTOKINE; SIGNAL.
 FT SIGNAL 1 37 POTENTIAL.
 FT CHAIN 38 130 CYTOKINE LIX.
 FT DISULFID 50 76 BY SIMILARITY.
 FT DISULFID 52 93 BY SIMILARITY.
 SQ SEQUENCE 130 AA; 14263 MW; 5F6C874C CRC32;

Query Match 71.7%; Score 66; DB 1; Length 130;
 Best Local Similarity 58.3%; Pred. No. 2.82e-03;
 Matches 7; Conservative 5; Mismatches 0; Indels 0; Gaps 0;

Db 91 NVCLDPOAPLIK 102
 QY 1 EICLDPEAPFLK 12

RESULT 7 STANDARD; PRT; 100 AA.
 ID MIP2-RAT
 AC P30348;
 DT 01-APR-1993 (REL. 25, CREATED)
 DT 01-APR-1993 (REL. 25, LAST SEQUENCE UPDATE)
 DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
 DE MACROPHAGE INFLAMMATORY PROTEIN 2 PRECURSOR (MIP2) (CINC-3).
 GN MIP2 OR MIP-2.
 OS RATTUS NORVEGICUS (RAT).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
 [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN-FISHER 344; TISSUE=LUNG;
 RA DRISCOLL K.;
 RN SUBMITTED (APR-1992) TO EMBL/GENBANK/DBJ DATA BANKS.
 [2]
 RP SEQUENCE FROM N.A.
 RC STRAIN-FISHER;
 RX MEDLINE; 95189993.
 RA FENG L., XIA Y., YOSHIMURA T., WILSON C.B.;
 RT "Modulation of neutrophil influx in glomerulonephritis in the rat
 RT with anti-macrophage inflammatory protein-2 (MIP-2) antibody.";
 RL J. CLIN. INVEST. 95:1009-1017(1995).
 [3]
 RP SEQUENCE FROM N.A.
 RC STRAIN=CD; TISSUE=LUNG;
 RA FARONE A., FARONE M., SHI M.M., KOBZIK L., PAULASKIS J.D.;
 RN SUBMITTED (MAR-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 [4]
 RP SEQUENCE OF 39-91 FROM N.A.
 RC STRAIN=CD-1; TISSUE=LUNG;
 RX MEDLINE; 93035653.
 RA HUANG S., PAULASKIS J.D., GODLESKI J.J., KOBZIK L.;
 RT "Expression of macrophage inflammatory protein-2 and KC mRNA in
 RT pulmonary inflammation";
 RL AM. J. PATHOL. 141:981-988(1992).
 [5]
 RP SEQUENCE OF 32-100.
 RC STRAIN=WISTAR;
 RX MEDLINE; 94318061.
 RA NAKAGAWA H., KOMORITA N., SHIBATA F., IKESUE A., KONISHI K.,
 RA FUJIOKA M., KATO H.;
 RT "Identification of cytokine-induced neutrophil chemoattractants

RT (CINC), rat GRO/CINC-2 alpha and CINC-2 beta, produced by granulation
 RT tissue in culture: purification, complete amino acid sequences and
 RT characterization.";
 RL BIOCHEM. J. 301:545-550(1994).
 RN [6]
 RP SEQUENCE OF 32-59.
 RC STRAIN=WISTAR;
 RX MEDLINE; 96183056.
 RA NAKAGAWA H., SHIOTA S., TAKANO K., SHIBATA F., KATO H.;
 RT "Cytokine-induced neutrophil chemoattractant (CINC)-2 alpha, a novel
 RT member of rat GRO/CINC, is a predominant chemokine produced by
 RT lipopolysaccharide-stimulated rat macrophages in culture.";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 220:945-948(1996).
 CC -!- FUNCTION: CHEMOTACTIC FOR HUMAN POLYMORPHONUCLEAR LEUKOCYTES BUT
 CC DOES NOT INDUCE CHEMOKINESIS OR AN OXIDATIVE BURST. CONTRIBUTES TO
 CC NEUTROPHIL ACTIVATION DURING INFLAMMATION.
 CC -!- SUBUNIT: HOMOTETRAMER.
 CC -!- TISSUE SPECIFICITY: AT LEAST EXPRESSED IN THE LUNG AND TRACHEA.
 CC -!- INDUCTION: IN LUNG, BY LIPOPOLYSACCHARIDE OR INFLAMMATION.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXC).
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 CC or send an email to license@isb-sib.ch).

DR EMBL; X65647; G56666; -
 DR EMBL; S77604; G998407; -
 DR EMBL; U45965; G1228141; -
 DR EMBL; S45855; F62497; -
 DR PIR; S21467; S21467.
 DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 DR PFAM; PF00048; I18; 1.
 DR HSSP; P10889; I1M12.
 KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 FT SIGNAL 1 31
 FT CHAIN 32 100 MACROPHAGE INFLAMMATORY PROTEIN 2.
 FT DISULFID 36 62 BY SIMILARITY.
 FT DISULFID 38 78 BY SIMILARITY.
 SQ SEQUENCE 100 AA; 10783 MW; 1AE9A34E CRC32;

Query Match 68.5%; Score 63; DB 1; Length 100;
 Best Local Similarity 63.6%; Pred. No. 1.49e-02;
 Matches 7; Conservative 4; Mismatches 0; Indels 0; Gaps 0;

Db 76 EICLDPEAPFLV 86
 QY 1 EICLDPEAPFL 11

RESULT 8
 ID PF4L.PIG STANDARD; PRT; 119 AA.
 AC P43030;
 DT 01-NOV-1995 (REL. 32, CREATED)
 DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
 DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
 DE PLATELET BASIC PROTEIN PRECURSOR (PBP).
 GN PBP.
 OS SUS SCROFA (PIG).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC ARTIODACTYLA; SUIFORMES; SUINA; SUIDAE; SUS.
 [1]
 RP SEQUENCE FROM N.A., AND SEQUENCE OF 40-119.
 RC TISSUE=PLATELET;
 RX MEDLINE; 94229068.
 RA POWER C.A., PROUDFOOT A.E.I., MAGNENAT E., BACON K., WELLS T.N.C.;
 RT "Molecular cloning and characterisation of a neutrophil chemotactic
 RT protein from porcine platelets.";
 RL EUR. J. BIOCHEM. 221:713-719(1994).

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TRANSMEM      906      926      POTENTIAL.
TRANSMEM      993      1013     POTENTIAL.
TRANSMEM      1150     1170     POTENTIAL.
TRANSMEM      1310     1330     POTENTIAL.
TRANSMEM      1335     1355     POTENTIAL.
TRANSMEM      1462     1482     POTENTIAL.
SEQUENCE      1524 AA; 170569 MW; E074D413 CRC32;

Query Match      68.5%; Score 63; DB 1; Length 1524;
Best Local Similarity 33.3%; Pred. No. 1.49e-02; Gaps 0;
Matches 4; Conservative 6; Mismatches 2; Indels 0;

Db 1479 DLCLEPDVQFLR 1490
      :::::|::
QY 1 EICLDPEAPFLK 12

RESULT 10
ID GRCG_BOVIN STANDARD; PRT: 98 AA.
AC Q46675;
DT 15-DEC-1998 (REL. 37, CREATED)
DT 15-DEC-1998 (REL. 37, LAST SEQUENCE UPDATE)
DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
DE GROWTH REGULATED PROTEIN HOMOLOG GAMMA PRECURSOR (GRO-GAMMA).
OS BOS TAURUS (BOVINE).
OC EUKARYOTA; METAZOA;
OC ARTIODACTYLA; RUMINANTIA; PECORA; BOVIDAE; BOVINA; BOS.
RN [1]
RP SEQUENCE FROM N.A.
RQ YOSHIMURA T., MODI W.S.;
RL SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -1- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CXCL).

```

OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 91170256.
 RA MAUMDAR S., GONDER D., KOUTSIS B., PONCZ M.;
 RT "Characterization of the human beta-thromboglobulin gene. Comparison
 RL with the gene for platelet factor 4.";
 RN J. BIOL. CHEM. 266:5785-5789(1991).
 [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 89229374.
 RA WENGER R.H., WICKI A.N., WALZ A., KIEFFER N., CLEMERTON K.J.;
 RT "Cloning of cDNA coding for connective tissue activating peptide III
 RL from a human platelet-derived lambda gt10 expression library.";
 RN BLOOD 73:1498-1503(1989).
 [3]
 RP SEQUENCE OF 35-53.
 RX MEDLINE; 86216117.
 RA HOLT J.C., HARRIS M.E., HOLT A.M., LANGE E., HENSCHEN A.,
 RA NEWTAROWSKI S.;
 RT "Characterization of human platelet basic protein, a precursor form
 RL of low-affinity platelet factor 4 and beta-thromboglobulin.";
 RN BIOCHEMISTRY 25:1988-1996(1986).
 [4]
 RP SEQUENCE OF 44-66 AND 125-128.
 RX MEDLINE; 83144010.
 RA CASTOR C.W., MILLER J.W., WALZ D.A.;
 RT "Structural and biological characteristics of connective tissue
 RL activating peptide (CTAP-III), a major human platelet-derived growth
 RT factor.";
 RN PROC. NATL. ACAD. SCI. U.S.A. 80:765-769(1983).
 [5]
 RP SEQUENCE OF 48-126.
 RX MEDLINE; 78187279.
 RA BEGG G.S., PEPPER D.S., CHESTERMAN C.N., MORGAN F.J.;
 RT "Complete covalent structure of human beta-thromboglobulin.";
 RN BIOCHEMISTRY 17:1739-1744(1976).
 [6]
 RP SEQUENCE OF 59-126.
 RX MEDLINE; 89193761.
 RA WALZ A., BAGGIOLINI M.;
 RT "A novel cleavage product of beta-thromboglobulin formed in cultures
 RL of stimulated mononuclear cells activates human neutrophils.";
 RN BIOCHEM. BIOPHYS. RES. COMMUN. 159:969-981(1989).
 [7]
 RP SEQUENCE OF 57-68.
 RX MEDLINE; 89391960.
 RA CASTOR C.W., WALZ D.A., RAGSDALE C.G., HOSSLER P.A., SMITH E.M.,
 RA BIGNALL M.C., AARON B.P., MOUNTJOY K.;
 RT "Connective tissue activation. XXIII. Biologically active cleavage
 RL products of CTAP-III from human platelets.";
 RN BIOCHEM. BIOPHYS. RES. COMMUN. 163:1071-1078(1989).
 [8]
 RP SEQUENCE OF 59-67.
 RX MEDLINE; 90155110.
 RA WALZ A., BAGGIOLINI M.;
 RT "Generation of the neutrophil-activating peptide NAP-2 from platelet
 RL basic protein or connective tissue-activating peptide III through
 RN monocyte proteases.";
 J. EXP. MED. 171:449-454(1990).
 [9]
 RP SYNTHESIS OF 59-126.
 RX MEDLINE; 91175767.
 RA CLARK-LEWIS I., MOSE B., WALZ A., BAGGIOLINI M., SCOTT G.J.,
 RA AEBERSOLD R.;
 RT "Chemical synthesis, purification, and characterization of two
 RL inflammatory proteins, neutrophil activating peptide 1
 RL (interleukin-8) and neutrophil activating peptide.";
 RN BIOCHEMISTRY 30:3128-3135(1991).
 [10]
 RP X-RAY CRYSTALLOGRAPHY OF 59-128.
 RX MEDLINE; 94307404.
 RA KUNGL A.J., MACHUS M., HUBER R., SCHWER C., LAM C., ASCHAUER H.,

RA EHN G., LINDLEY I.J.D., AUER M.;
 RT "Purification, crystallization and preliminary X-ray diffraction
 RL analysis of recombinant human neutrophil-activating peptide 2
 RL (rhNAP-2).";
 RN FEBS LETT. 347:300-303(1994).
 [11]
 RP X-RAY CRYSTALLOGRAPHY (1.9 ANGSTROMS) OF 59-128.
 RX MEDLINE; 95221354.
 RA MALKOWSKI M.G., WU J.Y., LAZAR J.B., JOHNSON P.H., EDWARDS B.F.P.;
 RT "The crystal structure of recombinant human neutrophil-activating
 RL peptide-2 (M61) at 1.9-A resolution.";
 RN J. BIOL. CHEM. 270:7077-7087(1995).
 CC -1- FUNCTION: LA-PF4A STIMULATES DNA SYNTHESIS, MITOSIS, GLYCOLYSIS,
 CC INTRACELLULAR CAMP ACCUMULATION, PROSTAGLANDIN E2 SECRETION, AND
 CC SYNTHESIS OF HYALURONIC ACID AND SULFATED GLYCOSAMINOGLYCAN. IT
 CC ALSO STIMULATES THE FORMATION AND SECRETION OF PLASMINOGEN
 CC ACTIVATOR BY HUMAN SYNOCIAL CELLS. NAP-2 IS A POTENT
 CC CHEMOATTRACTANT AND ACTIVATOR FOR NEUTROPHILS.
 CC -1- SUBUNIT: BETA-THROMBOGLOBULIN IS AN HOMOTETRAMER.
 CC -1- PTM: PROTEOLYTIC REMOVAL OF RESIDUES 1-9 PRODUCES THE ACTIVE
 CC PEPTIDE CONNECTIVE-TISSUE ACTIVATING PEPTIDE III (CTAP III) (LOW-
 CC AFFINITY PLATELET FACTOR IV (LA-PF4)).
 CC -1- PTM: PROTEOLYTIC REMOVAL OF RESIDUES 1-13 PRODUCES THE ACTIVE
 CC PEPTIDE BETA-THROMBOGLOBULIN, WHICH IS RELEASED FROM PLATELETS
 CC ALONG WITH PLATELET FACTOR 4 AND PLATELET-DERIVED GROWTH FACTOR.
 CC -1- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).
 CC -----
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 CC -----
 CC EMBL; M54995; G181176; -
 DR PIR; A39546; TGHU.
 DR PIR; A24448; A24448.
 DR PIR; A37382; A37382.
 DR PDB; 1NAP; 19-DEC-95.
 DR PDB; 1TVX; 11-JAN-97.
 DR SWISS-2DPAGE; P02775; HUMAN.
 DR MIM; 121010; -
 DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 DR PFAM; PF00048; il18; 1.
 DR CYTOKINE; CONNECTIVE TISSUE; GROWTH FACTOR; CHEMOTAXIS; MITOGEN;
 KW PLATELET; SIGNAL; 3D-STRUCTURE.
 FT SIGNAL
 FT CHAIN 1 34
 FT CHAIN 35 128 PLATELET BASIC PROTEIN (PBP).
 FT CHAIN 44 128 LA-PF4 / CTAP-III.
 FT CHAIN 48 128 BETA-THROMBOGLOBULIN.
 FT CHAIN 59 128 NAP-2.
 FT DISULFID 63 89
 FT DISULFID 65 105
 SQ SEQUENCE 128 AA; 13894 MW; 15B7D1DF CRC32;
 Query Match 67.4%; Score 62; DB 1; Length 128;
 Best Local Similarity 72.7%; Pred. No. 2.57e-02;
 Matches 8; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
 Db 104 ICDPDPAPRIK 114
 QY 2 ICDPDPAPRIK 12
 |||||:||||:
 |||||:||||:
 RESULT 12
 ID DEOC-SYNY3 STANDARD; PRT; 225 AA.
 AC P73618;
 DT 15-DEC-1998 (REL. 37, CREATED)
 DT 15-DEC-1998 (REL. 37, LAST SEQUENCE UPDATE)
 DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
 DE DEOXYRIBOSE-PHOSPHATE ALDOLASE (EC 4.1.2.4) (PHOSPHODOXYRIBOALDOLASE)

Sat Feb 5 15:13:56 2000

US-09-150-813-41.rsp

CC -!- FUNCTION: PRODUCED BY ACTIVATED MONOCYTES AND NEUTROPHILS AND
 CC EXPRESSED AT SITES OF INFLAMMATION.

CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).

CC PROSITE: PS00471; SMALL_CYTOKINES_CXC; 1.
 DR PFAM: PF00048; I18; 1.

DR HSP: P10889; I112.
 KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE.

SQ SEQUENCE 68 AA; 7670 MW; 8682C815 CRC32;

Query Match 65.2%; Score 60; DB 1; Length 68;
 Best Local Similarity 63.6%; Pred. No. 7.50e-02;
 Matches 7; Conservative 3; Mismatches 1; Indels 0;

Db 45 EVCLNPOAPRL 55

Qy 1 EICLDPEAPFL 11

RESULT 14
 ID GRO_MOUSE STANDARD; PRT; 96 AA.

AC P12850;

DT 01-OCT-1989 (REL. 12, LAST SEQUENCE UPDATE)

DT 01-OCT-1989 (REL. 12, LAST SEQUENCE UPDATE)

DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)

DE GROWTH REGULATED PROTEIN PRECURSOR (PLATELET-DERIVED GROWTH FACTOR-

DE INDUCIBLE PROTEIN KC) (SECRETORY PROTEIN N51).

GN GRO1 OR GRO OR MGSA.

OS MUS MUSCULUS (MOUSE).

OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;

OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; MUS.

CC [1]

CC SEQUENCE FROM N.A.

CC MEDLINE; 89139485.

CC QUENDO P., ALBERTA J., WEN D., GRAYCAR J.L., DERINCK R., STILES C.D.;

CC "The platelet-derived growth factor-inducible KC gene encodes a

CC secretory protein related to platelet alpha-granule proteins.";

CC J. BIOL. CHEM. 264:4133-4137(1989).

CC [2]

CC SEQUENCE FROM N.A.

CC MEDLINE; 89078502.

CC RYSECK R.P., MACDONALD-BRAVO H., MATTEI M.-G., BRAVO R.;

CC "Cloning and sequence of a secretory protein induced by growth

CC factors in mouse fibroblasts.";

CC EXP. CELL RES. 180:266-275(1989).

CC [3]

CC SEQUENCE FROM N.A.

CC STRAIN=129/SV;

CC BOZIC C.R., KOLAKOWSKI L.F. JR., VON UEXKULL C., GARCIA-RODRIGUEZ M.,

CC CONKLYN M.J., BRESLOW R., SHOWELL H.J., GERARD N.P., GERARD C.;

CC SUBMITTED (FEB-1995) TO EMBL/GENBANK/DBJ DATA BANKS.

CC [4]

CC SEQUENCE OF 1-10 FROM N.A.

CC TISSUE=LIVER;

CC MEDLINE; 96016008.

CC OHMORI Y., FUKUMOTO S., HAMILTON T.A.;

CC "Two structurally distinct kappa B sequence motifs cooperatively

CC control LPS-induced KC gene transcription in mouse macrophages.";

CC J. IMMUNOL. 155:3593-3600(1995).

CC -!- FUNCTION: HAS CHEMOTACTIC ACTIVITY FOR NEUTROPHILS. CONTRIBUTES TO

CC NEUTROPHIL ACTIVATION DURING INFLAMMATION (BY SIMILARITY).

CC -!- INDUCTION: BY PLATELET-DERIVED GROWTH FACTOR. IN LUNG, BY

CC LIPOPOLYSACCHARIDE OR INFLAMMATION (BY SIMILARITY).

CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE

CC C-X-C) (CHEMOKINE CXCL).

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DE (DEOXYRIBODOLASE).

GN DEOC OR SLL1776

OS SYNECHOCYSTIS SP. (STRAIN PCC 6803).

CC BACTERIA; CYANOBACTERIA; CHROCOCCALES; SYNECHOCYSTIS.

CC [1]

CC SEQUENCE FROM N.A.

CC MEDLINE; 97061201.

CC KANEKO T., SATO S., KOTANI H., TANAKA A., ASAMIZU E., NAKAMURA Y.,

CC MIYAJIMA N., HIROSAWA M., SUGIURA M., SASAMOTO S., KIMURA T.,

CC HOSOUCHI T., MATSUNO A., MURAKI A., NAKAZAKI N., NARUO K., OKUMURA S.,

CC SHIMPO S., TAKEUCHI C., WADA T., WATANABE A., YAMADA M., YASUDA M.,

CC TABATA S.;

CC "Sequence analysis of the genome of the unicellular cyanobacterium

CC Synechocystis sp. strain PCC6803. II. Sequence determination of the

CC entire genome and assignment of potential protein-coding regions.";

CC DNA RES. 3:109-136(1996).

CC -!- CATALYTIC ACTIVITY: 2-DEOXY-D-RIBOSE 5-PHOSPHATE -

CC D-GLYCERALDEHYDE 3-PHOSPHATE + ACETALDEHYDE

CC -!- PATHWAY: NUCLEOTIDE AND DEOXYRIBONUCLEOTIDE CATABOLISM.

CC -!- SUBCELLULAR LOCATION: CYTOPLASMIC (BY SIMILARITY).

CC -!- SIMILARITY: BELONGS TO THE DEOXYRIBOSE-PHOSPHATE ALDOLASE FAMILY.

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 CC or send an email to license@isb-sib.ch).

CC EMBL; D90908; G1652744; -

CC LYASE; SCHIFF BASE.

CC SEQUENCE 225 AA; 23874 MW; 0971487A CRC32;

Query Match 67.4%; Score 62; DB 1; Length 225;

Best Local Similarity 58.3%; Pred. No. 2.57e-02;

Matches 7; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Db 145 EICLDAGVOYK 156

Qy 1 EICLDPEAPFLK 12

RESULT 13

ID MI2A_RAT

AC Q10746;

DT 01-OCT-1996 (REL. 34, CREATED)

DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)

DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)

DE MACROPHAGE INFLAMMATORY PROTEIN-2-ALPHA (MIP2-ALPHA) (CINC-2-ALPHA).

OS RATUUS NORVEGICUS (RAT).

OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;

OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.

CC [1]

CC SEQUENCE.

CC STRAIN=WISTAR;

CC MEDLINE; 94318061.

CC NAKAGAWA H., KOMORI N., SHIBATA F., IKESUE A., KONISHI K.,

CC FUJIOKA M., KATO H.;

CC "Identification of cytokine-induced neutrophil chemoattractants

CC (CINC), rat GRO/CINC-2 alpha and CINC-2 beta, produced by granulation

CC tissue in culture: purification, complete amino acid sequences and

CC characterization.";

CC BIOCHEM. J. 301:545-550(1994).

CC [2]

CC SEQUENCE OF 1-29.

CC STRAIN=WISTAR;

CC MEDLINE; 96183056.

CC NAKAGAWA H., SHIOTA S., TAKANO K., SHIBATA F., KATO H.;

CC "Cytokine-induced neutrophil chemoattractant (CINC)-2 alpha, a novel

CC member of rat GRO/CINCs, is a predominant chemokine produced by

CC lipopolysaccharide-stimulated rat macrophages in culture.";

CC BIOCHEM. BIOPHYS. RES. COMMUN. 220:945-948(1996).

```

CC -----
DR EMBL: J04596; G201043; -
DR EMBL: U20834; G706843; -
DR EMBL: U20527; G706843; JOINED.
DR EMBL: S79767; E220978; -
DR PIR: A32954; A32954.
DR PIR: JH0081; JH0081.
DR MGD: MGI:108068; GRC1.
DR PROSITE: PS00471; SMALL_CYTOKINES_CXC; 1.
DR PFAM: PF00048; 118; 1.
DR HSPF: P09341; IMSH.
KW CYTOKINE; GROWTH FACTOR; INFLAMMATORY RESPONSE; SIGNAL.
FT SIGNAL 1 24 PROBABLE.
FT CHAIN 25 96 GROWTH REGULATED PROTEIN.
FT DISULFID 33 59 BY SIMILARITY.
FT DISULFID 35 75 BY SIMILARITY.
SQ SEQUENCE 96 AA; 10254 MW; 36FDD348 CRC32;

Query Match 65.2%; Score 60; DB 1; Length 96;
Best Local Similarity 72.7%; Pred. No. 7.50e-02;
Matches 8; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 73 EACLDPEAPLV 83
QY 1 EICLDPEAPFL 11

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RESULT 15
ID MIP2_MOUSE STANDARD; PRT; 100 AA.
AC P10889;
DT 01-JUL-1989 (REL. 11, CREATED)
DT 01-FEB-1991 (REL. 17, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MACROPHAGE INFLAMMATORY PROTEIN 2 PRECURSOR (MIP2).
GN MIP2 OR MIP-2.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; MAM.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 90354792.
RA TERAMP-OLSON P., GALLEGOS C., BAUER D., MCCLAIN J., SHERRY B.,
RA FABRE M., VAN DEVENTER S., CERAMI A.;
RT "Cloning and characterization of cDNAs for murine macrophage
RT inflammatory protein 2 and its human homologues."
RL J. EXP. MED. 172:911-919(1990).
RN [2]
RP SEQUENCE OF 28-59.
RX MEDLINE; 89098980.
RA WOLPE S.D., SHERRY B., JUERS D., DAVATELIS G., YURT R.W., CERAMI A.;
RT "Identification and characterization of macrophage inflammatory
RT protein 2."
RL PROC. NATL. ACAD. SCI. U.S.A. 86:612-616(1989).
RN [3]
RP STRUCTURE BY NMR.
RX MEDLINE; 98285538.
RA SHAO W., JERVA L.F., WEST J., LOLIS E., SCHWEITZER B.I.;
RT "Solution structure of murine macrophage inflammatory protein-2."
RL BIOCHEMISTRY 37:8303-8313(1998).
CC -1- FUNCTION: CHEMOTACTIC FOR HUMAN POLYMORPHONUCLEAR LEUKOCYTES BUT
CC DOES NOT INDUCE CHEMOKINESIS OR AN OXIDATIVE BURST.
CC -1- SUBUNIT: HOMOTETRAMER.
CC -1- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CXC).
CC -----
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DR EMBL: X53798; G53129; -
DR PIR: JH0200; JH0200.
DR PDB: 1MT2; 29-APR-98.
DR MGD: MGI:96991; MIP2.
DR PROSITE: PS00471; SMALL_CYTOKINES_CXC; 1.
DR PFAM: PF00048; 118; 1.
KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL; 3D-STRUCTURE.
FT SIGNAL 1 27
FT CHAIN 28 100 MACROPHAGE INFLAMMATORY PROTEIN 2.
FT DISULFID 36 62
FT DISULFID 38 78
SQ SEQUENCE 100 AA; 10621 MW; 333AC6A4 CRC32;

Query Match 65.2%; Score 60; DB 1; Length 100;
Best Local Similarity 70.0%; Pred. No. 7.50e-02;
Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86
QY 2 ICLDPEAPFL 11

```

Search completed: Fri Feb 4 17:16:12 2000
Job time : 23 secs.

 M P S R C H

 (TM)

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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 17:15:11 2000; MasPar time 3.59 Seconds
 133.808 Million cell updates/sec

Tabular output not generated.

Title: >US-09-150-813-41
 Description: (1-12) from US09150813.pep
 Perfect Score: 92
 Sequence: 1 EICLDPEAPFLK 12

Scoring table: PAM 150
 Gap 15

Searched: 122810 seqs, 40068593 residues

Post-processing: Minimum Match 0%
 Listing first 45 summaries

Database: pir60
 1:pir1 2:pir2 3:pir3 4:pir4

Statistics: Mean 24.908; Variance 32.652; scale 0.763

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	ID	Description	Pred. No.
1	92	100.0	114	2	A55010 neutrophil-activating	1.45e-08
2	87	94.6	75	2	A54188 granulocyte chemotact	2.45e-07
3	74	80.4	75	2	B54188 granulocyte chemotact	2.88e-04
4	70	76.1	132	2	A57325 C-X-C chemokine LIX	2.30e-03
5	67	72.8	117	2	B44253 alveolar macrophage c	1.05e-02
6	63	68.5	53	2	I51886 macrophage inflammato	7.58e-02
7	63	68.5	100	2	S21457 macrophage inflammato	7.58e-02
8	63	68.5	100	2	I55614 macrophage inflammato	7.58e-02
9	63	68.5	119	2	S42881 platelet basic protei	7.58e-02
10	62	67.4	128	1	TGHU beta-thromboglobulin	1.23e-01
11	62	67.4	225	2	B71466 deoxyribose-phosphate	1.23e-01
12	62	67.4	427	2	B71466 hypotheical protein	1.23e-01
13	60	65.2	96	2	A32954 gro-alpha precursor	3.19e-01
14	60	65.2	100	2	JH0200 macrophage inflammato	3.19e-01
15	60	65.2	100	2	S42198 cytokine-induced neut	3.19e-01
16	58	63.0	53	2	I54831 gene KC protein - rat	8.14e-01
17	58	63.0	96	2	JH0572 neutrophil chemo-atr	8.14e-01
18	58	63.0	314	2	JC4066 ADP-L-glycero-D-manno	8.14e-01
19	57	62.0	103	2	I50417 RSV-induced protein	1.29e+00
20	57	62.0	103	2	A36736 transformation-induce	1.29e+00
21	57	62.0	167	1	UVPVF3 nonstructural protein	1.29e+00
22	57	62.0	225	2	S75498 hypotheical protein	1.29e+00
23	57	62.0	310	2	JU0299 ADP-L-glycero-D-manno	1.29e+00

24 24 62.0 1198 2 S51434 hypothetical protein 1.29e+00
 25 25 60.9 212 4 S37457 self-incompatibility- 2.03e+00
 26 26 60.9 218 4 S37459 self-incompatibility 2.03e+00
 27 27 60.9 277 2 A39964 photosystem II oxygen 2.03e+00
 28 28 60.9 1487 2 B41182 collagen alpha 1(II) 3.19e+00
 29 29 59.8 101 2 B28414 growth-regulated prot 3.19e+00
 30 30 59.8 219 2 A70314 deoxyribose-phosphate 3.19e+00
 31 31 59.8 296 2 S51746 hypothetical protein 3.19e+00
 32 32 59.8 463 2 B55508 interferon alpha ifis 4.98e+00
 33 33 58.7 402 2 G70071 conserved hypotheica 3.19e+00
 34 34 57.6 181 2 D65179 hypotheical protein 7.72e+00
 35 35 57.6 1001 2 S66704 hypotheical protein 7.72e+00
 36 36 57.6 1051 2 A35763 collagen alpha 2 chai 7.72e+00
 37 37 57.6 1487 1 CGH06C collagen alpha 1(II) 7.72e+00
 38 38 57.6 1896 2 T01490 ubiquitin carboxyl-te 7.72e+00
 39 39 56.5 273 2 S06736 photosystem II oxygen 1.19e+01
 40 40 56.5 585 2 A56812 H+-transporting ATP s 1.19e+01
 41 41 56.5 730 1 IJMSCM M-cadherin - mouse (f 1.19e+01
 42 42 56.5 814 2 G02878 cadherin-15 precursor 1.19e+01
 43 43 55.4 107 2 A28414 melanoma growth-stimu 1.83e+01
 44 44 55.4 147 2 H69742 hypotheical protein 1.83e+01
 45 45 55.4 2958 2 S64921 probable membrane pro 1.83e+01

ALIGNMENTS

RESULT 1
 ENTRY #type complete
 TITLE neutrophil-activating peptide ENA-78 precursor - human
 ALTERNATE_NAMES epithelial-derived neutrophil-activating peptide 78 (ENA-78)
 ORGANISM #formal_name Homo sapiens #common_name man
 DATE 11-Nov-1994 #sequence_revision 03-Oct-1995 #text_change

13-Nov-1998
 JC2433; A55010; I37357; JH0558; PS0347; S44075
 JC2433
 Corbett, M.S.; Schmitt, I.; Riess, O.; Walz, A.
 Biochem. Biophys. Res. Commun. (1994) 205:612-617
 Characterization of the gene for human neutrophil-activating peptide 78 (ENA-78).
 #cross-references MUID:95091791
 #accession JC2433
 #molecule_type DNA
 #residues 1-114 #label COR
 #cross-references GB:L37036; NID:g607030; PID:g607031
 REFERENCE A55010
 Chang, M.; McNinch, J.; Basu, R.; Simonet, S.
 J. Biol. Chem. (1994) 269:25277-25282
 Cloning and characterization of the human neutrophil-activating peptide (ENA-78) gene.
 #accession A55010
 #molecule_type DNA
 #residues 1-12, 'S', 14-114 #label CHA
 #cross-references GB:U12709
 REFERENCE I37357
 Power, C.A.; Furness, R.B.; Brawand, C.; Wells, T.N.
 Gene (1994) 151:333-334
 Cloning of a full-length cDNA encoding the neutrophil-activating peptide ENA-78 from human platelets.
 #cross-references MUID:95129887
 #accession I37357
 translated from GB/EMBL/DBJ
 #molecule_type mRNA
 #residues 1-114 #label RES
 #cross-references EMBL:X78686; NID:g471242; PID:g471243
 REFERENCE JH0558
 Walz, A.; Burgence, R.; Car, B.; Baggiolini, M.; Kunkel, S.L.; Strieter, R.M.
 J. Exp. Med. (1991) 174:1355-1362
 Structure and neutrophil-activating properties of a novel inflammatory peptide (ENA-78) with homology to interleukin 8.
 #cross-references MUID:92078844
 #accession JH0558

```

##molecule_type mRNA
##residues 43-114 ##label WALL
##experimental_source pulmonary type II epithelial cell line A549
#accession PS0347
##molecule_type protein
##residues 37-70;93-114 ##label WAL2
GENETICS
#gene ENA78; NAP
#map_position 4q13-q21
#introns 37/1; 81/3; 109/2
CLASSIFICATION
#superfamily beta-thromboglobulin
#cytokine
FEATURE
1-17
37-114
#domain signal sequence #status predicted #label SIG\
#product neutrophil-activating peptide ENA-78 #status
experimental #label Mar
SUMMARY
#length 114 #molecular-weight 11972 #checksum 9263
Query Match 100.0%; Score 92; DB 2; Length 114;
Best Local Similarity 100.0%; Pred. No. 1.45e-08;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Db 89 EICLDPEAPFLK 100
|||||
QY 1 EICLDPEAPFLK 12

RESULT 2
ENTRY
TITLE A54188 #type complete
ALTERNATE_NAMES granulocyte chemotactic protein - human
ORGANISM chemokine GCP-2
#formal_name Homo sapiens #common_name man
DATE 13-Sep-1994 #sequence_revision 18-Nov-1994 #text_change
03-Oct-1995
ACCESSIONS A54188; A46519
REFERENCE A54188
#authors Proost, P.; Wuyts, A.; Conings, R.; Lenaerts, J.P.; Billiau,
A.; Opdenakker, G.; Van Damme, J.
#journal Biochemistry (1993) 32:10170-10177
#title Human and bovine granulocyte chemotactic protein-2: complete
amino acid sequence and functional characterization as
chemokines.
#cross-references MUID:94001982
#accession A54188
##status preliminary
##molecule_type protein
##residues 1-75 ##label PRO
##experimental_source MG-63 osteosarcoma cells
#note sequence extracted from NCBI backbone (NCBIP:137966)
REFERENCE A46519
#authors Proost, P.; De Wolf-Peeters, C.; Conings, R.; Opdenakker, G.;
Billiau, A.; Van Damme, J.
#journal J. Immunol. (1993) 150:1000-1010
#title Identification of a novel granulocyte chemotactic protein
(GCP-2) from human tumor cells. In vitro and in vivo
comparison with natural forms of GRO, IP-10, and IL-8.
#cross-references MUID:93139489
#accession A46519
##status preliminary
##molecule_type protein
##residues 1-20 ##label PR2
##experimental_source MG-63 osteosarcoma cells
#note sequence extracted from NCBI backbone (NCBIP:123121)
CLASSIFICATION
#superfamily beta-thromboglobulin
#chemotaxis
SUMMARY
#length 75 #molecular-weight 8074 #checksum 86
Query Match 94.6%; Score 87; DB 2; Length 75;
Best Local Similarity 83.3%; Pred. No. 2.45e-07;
Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
Db 52 QVCLDPEAPFLK 63
|||||

```

```

QY 1 EICLDPEAPFLK 12

RESULT 3
ENTRY
TITLE B54188 #type complete
ORGANISM granulocyte chemotactic protein, GCP-2 - bovine
#formal_name Bos primigenius taurus #common_name cattle
DATE 13-Sep-1994 #sequence_revision 18-Nov-1994 #text_change
12-Apr-1995
ACCESSIONS B54188
REFERENCE A54188
#authors Proost, P.; Wuyts, A.; Conings, R.; Lenaerts, J.P.; Billiau,
A.; Opdenakker, G.; Van Damme, J.
#journal Biochemistry (1993) 32:10170-10177
#title Human and bovine granulocyte chemotactic protein-2: complete
amino acid sequence and functional characterization as
chemokines.
#cross-references MUID:94001982
#accession B54188
##status preliminary
##molecule_type protein
##residues 1-75 ##label PRO
##experimental_source MDBK cells
#note sequence extracted from NCBI backbone (NCBIP:137967)
CLASSIFICATION
#superfamily beta-thromboglobulin
SUMMARY
#length 75 #molecular-weight 7931 #checksum 8842
Query Match 80.4%; Score 74; DB 2; Length 75;
Best Local Similarity 75.0%; Pred. No. 2.88e-04;
Matches 9; Conservative 3; Mismatches 0; Indels 0; Gaps 0;
Db 52 EICLDPEAPFLK 63
|||||
QY 1 EICLDPEAPFLK 12

RESULT 4
ENTRY
TITLE A57325 #type complete
ALTERNATE_NAMES C-X-C chemokine LIX - mouse
ORGANISM GARG-8/LIX; glucocorticoid-attenuated response gene 8
#formal_name Mus musculus #common_name house mouse
DATE 08-Dec-1995 #sequence_revision 08-Dec-1995 #text_change
08-Sep-1997
ACCESSIONS A57325
REFERENCE A57325
#authors Smith, J.B.; Herschman, H.R.
#journal J. Biol. Chem. (1995) 270:16756-16765
#title Glucocorticoid-attenuated response genes encode intercellular
mediators, including a new C-X-C chemokine.
#cross-references MUID:95348101
#accession A57325
##status preliminary; not compared with conceptual translation
##molecule_type mRNA
##residues 1-132 ##label SMI
#cross-references GB:U97267; NID:9950159; PID:9950159
CLASSIFICATION
#superfamily beta-thromboglobulin
SUMMARY
#length 132 #molecular-weight 14190 #checksum 2181
Query Match 76.1%; Score 70; DB 2; Length 132;
Best Local Similarity 75.0%; Pred. No. 2.30e-03;
Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
Db 93 EICLDPEAPFLK 104
|||||
QY 1 EICLDPEAPFLK 12

RESULT 5
ENTRY
TITLE B44253 #type complete
ORGANISM alveolar macrophage chemotactic factor-II (AMCF-II)
#intercrine-alpha protein - pig
#formal_name Sus scrofa domestica #common_name domestic pig
DATE 30-Apr-1993 #sequence_revision 18-Nov-1994 #text_change

```

```

29-Jan-1999
B44253
A44253
REFERENCE
#authors Goodman, R.B.; Foster, D.C.; Mathewes, S.L.; Osborn, S.G.;
#journal Kuiper, J.L.; Forstrom, J.W.; Martin, T.R.
#title Biochemistry (1992) 31:10483-10490
#title Molecular cloning of porcine alveolar macrophage-derived
neutrophil chemotactic factors I and II: identification of
porcine IL-8 and another intercrine-alpha protein.
#cross-references MUID:93041741
#accession B44253
#status preliminary
#molecule_type mRNA; protein
#residues 1-117 #label GOO
#cross-references GB:M9368; NID:g164325; PID:g164326
#experimental_source alveolar macrophage
#note NCBIP:117418
sequence extracted from NCB1 backbone (NCBIN:117417,
NCBIP:117418)
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 117 #molecular-weight 12343 #checksum 9615
Query Match 72.8%; Score 67; DB 2; Length 117;
Best Local Similarity 66.7%; Pred. No. 1.05e-02;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
Db 92 EVCLDPKAPLIK 103
QY 1 EICLDPEAPFLK 12

RESULT 6
ENTRY I51886 #type fragment
TITLE macrophage inflammatory protein-2 - rat (fragment)
ORGANISM #formal_name Rattus sp. #common_name rat
DATE 12-Aug-1996 #sequence_revision 12-Aug-1996 #text_change
16-Feb-1997
ACCESSIONS I51886
REFERENCE I51886
#authors Huang, S.; Paulauskis, J.D.; Godleski, J.J.; Kobzik, L.
#journal Am. J. Pathol. (1992) 141:981-988
#title Expression of macrophage inflammatory protein-2 and KC mRNA
in pulmonary inflammation.
#cross-references MUID:93035653
#accession I51886
#status preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-53 #label RES
#cross-references GB:S45855; NID:g257054
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 53 #checksum 9622
Query Match 68.5%; Score 63; DB 2; Length 53;
Best Local Similarity 63.6%; Pred. No. 7.58e-02;
Matches 7; Conservative 4; Mismatches 0; Indels 0; Gaps 0;
Db 38 EVCLNPEAPLV 48
QY 1 EICLDPEAPFL 11

RESULT 7
ENTRY S21467 #type complete
TITLE macrophage inflammatory protein 2 - rat
ALTERNATE_NAMES chemoattractant p-1
ORGANISM #formal_name Rattus norvegicus #common_name Norway rat
DATE 20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change
08-Sep-1997
ACCESSIONS S21467; D48988
REFERENCE S21467
#authors Driscoll, K.
#submission submitted to the EMBL Data Library, April 1992
#accession S21467
#status preliminary

#molecule_type mRNA
#residues 1-100 #label DRI
#cross-references EMBL:X56647; NID:g56665; PID:g56666
REFERENCE A48988
#authors Nakagawa, H.; Ikese, A.; Hatakeyama, S.; Kato, H.; Gotoda,
T.; Komorita, N.; Watanabe, K.; Miyai, H.
#journal Biochem. Pharmacol. (1993) 45:1425-1430
#title Production of an interleukin-8-like chemokine by
cytokine-stimulated rat NRK-49F fibroblasts and its
suppression by anti-inflammatory steroids.
#cross-references MUID:93228656
#accession D48988
#status preliminary
#molecule_type protein
#residues 32-45 #label NAK
#experimental_source kidney, NRK-49F fibroblasts
#note #sequence extracted from NCB1 backbone (NCBIP:129129)
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 100 #molecular-weight 10783 #checksum 709
Query Match 68.5%; Score 63; DB 2; Length 100;
Best Local Similarity 63.6%; Pred. No. 7.58e-02;
Matches 7; Conservative 4; Mismatches 0; Indels 0; Gaps 0;
Db 76 EVCLNPEAPLV 86
QY 1 EICLDPEAPFL 11

RESULT 8
ENTRY I55614 #type complete
TITLE macrophage inflammatory protein-2 - rat
ORGANISM #formal_name Rattus sp. #common_name rat
DATE 26-Jul-1996 #sequence_revision 26-Jul-1996 #text_change
16-Feb-1997
ACCESSIONS I55614
REFERENCE I55614
#authors Feng, L.; Xia, Y.; Yoshimura, T.; Wilson, C.B.
#journal J. Clin. Invest. (1995) 95:1009-1017
#title Modulation of neutrophil influx in glomerulonephritis in the
rat with anti-macrophage inflammatory protein-2 (MIP-2)
antibody.
#cross-references MUID:95189993
#accession I55614
#status preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-100 #label RES
#cross-references GB:S77604; NID:g998406; PID:g998407
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 100 #molecular-weight 10783 #checksum 709
Query Match 68.5%; Score 63; DB 2; Length 100;
Best Local Similarity 63.6%; Pred. No. 7.58e-02;
Matches 7; Conservative 4; Mismatches 0; Indels 0; Gaps 0;
Db 76 EVCLNPEAPLV 86
QY 1 EICLDPEAPFL 11

RESULT 9
ENTRY S42881 #type complete
TITLE platelet basic protein - pig
ALTERNATE_NAMES #formal_name Sus scrofa domestica #common_name domestic pig
ORGANISM #formal_name Sus scrofa domestica #common_name domestic pig
DATE 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change
17-Mar-1999
ACCESSIONS S43460; S42881
REFERENCE S43460
#authors Power, C.A.; Proudfoot, A.E.I.; Magnehat, E.; Bacon, K.B.;
Wells, T.N.C.
#journal Eur. J. Biochem. (1994) 221:713-719
#title Molecular cloning and characterisation of a neutrophil
chemotactic protein from porcine platelets.

```

```

#cross-references MUID:94229068
#accession S43460
#status preliminary
#molecule_type mRNA
#residues 1-119 ##label POW
##cross-references EMBL:X77935; NID:9457753; PID:9457754
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 119 #molecular_weight 12615 #checksum 9198

Query Match 68.5% Score 63; DB 2; Length 119;
Best Local Similarity 81.8%; Pred. No. 7.58e-02;
Matches 9; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 95 ICDPEAPRIK 105
QY 2 ICDPEAPFLK 12

RESULT 10
ENTRY TGHU #type complete
TITLE beta-thromboglobulin precursor - human
CONTAINS connective-tissue activating peptide III; CTAP-III;
histamine-releasing factor; neutrophil-activating peptide
2; platelet basic protein
ORGANISM #formal_name Homo sapiens #common_name man
DATE 30-Apr-1979 #sequence_revision 31-Dec-1992 #text_change
26-Feb-1999
ACCESSIONS A39546; A37382; A24448; PL0222; A93982; A90411; A60709;
A61240; B61240; A03240; A30159; A33516; S46247
REFERENCE A39546
#authors Majumdar, S.; Gonder, D.; Koutsis, B.; Poncz, M.
#journal J. Biol. Chem. (1991) 266:5785-5789
#title Characterization of the human beta-thromboglobulin gene.
#cross-references MUID:91170256
#accession A39546
##molecule_type DNA
##residues 1-128 ##label MAJ
##cross-references GB:M54995; NID:g181175; PID:g181176
##note the authors translated the codon GAT for residue 109 as
Pro

REFERENCE A37382
#authors Wenger, R.H.; Wicki, A.N.; Walz, A.; Kieffer, N.; Clemetson,
K.J.
#journal Blood (1989) 73:1498-1503
#title Cloning of cDNA coding for connective tissue activating
peptide III from a human platelet-derived lambda dgtII
expression library.
#cross-references MUID:89229374
#accession A37382
##molecule_type mRNA
##residues 1-128 ##label WEN
##cross-references GB:M54995; NID:g181175; PID:g181176; GB:M38441
REFERENCE A24448
#authors Holt, J.C.; Harris, M.E.; Holt, A.M.; Lange, E.; Henschen,
A.; Niewiarowski, S.
#journal Biochemistry (1986) 25:1988-1996
#title Characterization of human platelet basic protein, a precursor
form of low-affinity platelet factor 4 and
beta-thromboglobulin.
#cross-references MUID:8621617
#accession A2448
##molecule_type protein
##residues 35-53 ##label HOL
REFERENCE PL0222
#authors Walz, A.; Baggiolini, M.
#journal J. Exp. Med. (1990) 171:449-454
#title Generation of the neutrophil-activating peptide NAP-2 from
platelet basic protein or connective tissue-activating
peptide III through monocyte proteases.
#cross-references MUID:90155110
#accession PL0222
##molecule_type protein

```

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##residues 54-67 ##label WAL
REFERENCE A93982
#authors Castor, C.W.; Miller, J.W.; Walz, D.A.
#journal Proc. Natl. Acad. Sci. U.S.A. (1983) 80:765-769
#title Structural and biological characteristics of connective
tissue activating peptide (CTAP-III), a major human
platelet-derived growth factor.
#cross-references MUID:83144010
#accession A93982
##molecule_type protein
##residues 44-66; 125-128 ##label CAS
REFERENCE A90411
#authors Begg, G.S.; Pepper, D.S.; Chesterman, C.N.; Morgan, F.J.
#journal Biochemistry (1978) 17:1739-1744
#title Complete covalent structure of human beta-thromboglobulin.
#cross-references MUID:78187279
#accession A90411
##molecule_type protein
##residues 48-128 ##label BEG
REFERENCE A60709
#authors Baeza, M.L.; Reddigari, S.R.; Kornfeld, D.; Ramani, N.;
Smith, E.M.; Hossler, P.A.; Fischer, T.; Castor, C.W.;
Gorevic, P.G.; Kaplan, A.P.
#journal J. Clin. Invest. (1990) 85:1516-1521
#title Relationship of one form of human histamine-releasing factor
to connective tissue activating peptide-III.
#cross-references MUID:90237229
#accession A60709
##molecule_type protein
##residues 44-62, 'X', 64-79 ##label BAE
REFERENCE A61240
#authors Kaplan, A.P.; Baeza, M.; Reddigari, S.; Kuna, P.
#journal Int. Arch. Allergy Appl. Immunol. (1991) 94:148-153
#title Histamine-releasing factors.
#cross-references MUID:92040226
#accession A61240
##molecule_type protein
##residues 44-61, 'XX', 64 ##label KAP
REFERENCE B61240
#authors Kungl, A.J.; Machius, M.; Huber, R.; Schwer, C.; Lam, C.;
Aschauer, H.; Ehn, G.; Lindley, I.J.D.; Auer, M.
#journal FEBS Lett. (1994) 347:300-303
#title Purification, crystallization and preliminary X-ray
diffraction analysis of recombinant human
neutrophil-activating peptide 2 (rhnAP-2).
#cross-references MUID:94307404
#contents annotation
COMMENT There appears to be a second beta-thromboglobulin-like human gene.
COMMENT Connective-tissue activating peptides (CTAP) are a group of
proteins capable of activating connective tissue cells. CTAP-I,
-II, -III and -P2, and -PMN are of lymphoid, tumor cell, human
platelet, and polymorphonuclear leukocyte origin, respectively.
CTAP-III, a monomer isolated from platelets, stimulates DNA
synthesis, mitosis, glycolysis, intracellular cAMP accumulation,
prostaglandin E2 secretion, and synthesis of hyaluronic acid and
sulfated glycosaminoglycan. It also stimulates the formation and
secretion of plasminogen activator by human synovial cells.
COMMENT Proteolytic removal of the first four residues of CTAP-III produces
the active peptide beta-thromboglobulin, which is released from
platelets along with platelet factor 4 and platelet-derived
growth factor.
GENETICS GDB:PPBP; THRBGI
#gene ##cross-references GDB:127391; OMIM:121010
#map_position 4p12-q13
#introns 50/1; 95/2
CLASSIFICATION #superfamily beta-thromboglobulin
KEYWORDS growth factor; homotetramer; platelet
FEATURE 1-34
#domain signal sequence #status predicted #label SIG\

```

Sat Feb 5 15:13:55 2000

```

35-43      #domain propeptide #status predicted #label PROX
44-128     #product connective-tissue activating peptide III
          #status experimental #label CTAP\
48-128     #product beta-thromboglobulin #status experimental
          #label BTG\
59-128     #product neutrophil-activating peptide 2 #status
          experimental #label NAP2\
63-89,65-105 #length 128 #molecular-weight 13894 #checksum 6910
SUMMARY
Query Match      67.4%; Score 62; DB 1; Length 128;
Best Local Similarity 72.7%; Pred. No. 1.23e-01;
Matches          8; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 104 ICLDPDAPRIK 114
QY 2 ICLDPEAPFLK 12

RESULT 11
ENTRY S77105 #type complete
TITLE deoxyribose-phosphate aldolase (EC 4.1.2.4) - Synechocystis
        sp. (strain PCC 6803)
ALTERNATE_NAMES protein sl11776
ORGANISM #formal_name Synechocystis sp.
#variety PCC 6803
DATE 25-Apr-1997 #sequence_revision 25-Apr-1997 #text_change
        21-Aug-1998
ACCESSIONS S77105
REFERENCE S74322
#authors Kaneko, T.; Sato, S.; Kotani, H.; Tanaka, A.; Asamizu, E.;
        Nakamura, Y.; Miyajima, N.; Hirose, M.; Sugita, M.;
        Sasamoto, S.; Kimura, T.; Hosouchi, T.; Matsuno, A.;
        Muraki, A.; Nakazaki, N.; Naruo, K.; Okumura, S.; Shimpo,
        S.; Takeuchi, C.; Wada, T.; Watanabe, A.; Yamada, M.;
        Yasuda, M.; Tabata, S.
#journal DNA Res. (1996) 3:109-136
#title Sequence analysis of the genome of the unicellular
        cyanobacterium Synechocystis sp. PCC6803. II. Sequence
        determination of the entire genome and assignment of
        potential protein-coding regions.
#cross-references MUID:97061201
#accession S77105
#status nucleic acid sequence not shown; translation not shown
#molecule_type DNA
#residues 1-225 #label KAN
#cross-references EMBL:D90908; GB:AB001339; NID:gl652725; PID:d1018396;
        PID:gl652744
#note the nucleotide sequence was submitted to the EMBL Data
        Library, June 1996

GENETICS deoc
#gene #superfamily deoxyribose-phosphate aldolase
CLASSIFICATION aldehyde-lyase; carbon-carbon lyase
KEYWORDS #length 225 #molecular-weight 23874 #checksum 7847
SUMMARY

Query Match      67.4%; Score 62; DB 2; Length 225;
Best Local Similarity 58.3%; Pred. No. 1.23e-01;
Matches          7; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

Db 145 EICLDAGVOYLK 156
QY 1 EICLDPEAPFLK 12

RESULT 12
ENTRY B71466 #type complete
TITLE hypothetical protein CT825 - Chlamydia trachomatis (serotype
        D, strain UW3/Cx)
ORGANISM #formal_name Chlamydia trachomatis
DATE 13-Sep-1998 #sequence_revision 13-Sep-1998 #text_change
        21-Nov-1998
ACCESSIONS B71466

```

```

REFERENCE A71570
#authors Stephens, R.S.; Kalman, S.; Lammel, C.J.; Fan, J.; Marathe,
        R.; Aravind, L.; Mitchell, W.P.; Olinger, L.; Tatusov,
        R.; Zhao, Q.; Koonin, E.V.; Davis, R.W.
#journal Science (1998) 282:754-759
#title Genome sequence of an obligate intracellular pathogen of
        humans: Chlamydia trachomatis.
#cross-references MUID:9900809
#accession B71466
#status preliminary
#molecule_type DNA
#residues 1-427 #label ARN
#cross-references GB:AE001355; GB:AE001273; NID:g3329292; PID:g3329295
#experimental_source serotype D, strain UW-3/Cx

GENETICS CT825
#gene #length 427 #molecular-weight 48583 #checksum 4805
SUMMARY
Query Match      67.4%; Score 62; DB 2; Length 427;
Best Local Similarity 70.0%; Pred. No. 1.23e-01;
Matches          7; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 412 CLSPEASYLK 421
QY 3 CLDPEAPFLK 12

RESULT 13
ENTRY A32954 #type complete
TITLE gro-alpha precursor - mouse
ALTERNATE_NAMES gro protein; growth regulated protein; melanoma
        growth-stimulating activity factor; melanoma mitogenic
        protein; secretory protein N51
ORGANISM #formal_name Mus musculus #common_name house mouse
DATE 20-Oct-1989 #sequence_revision 20-Oct-1989 #text_change
        08-Sep-1997
ACCESSIONS A32954; JH0081
REFERENCE A32954
#authors Oquendo, P.; Alberta, J.; Wen, D.; Graycar, J.L.; Derynck,
        R.; Stiles, C.D.
#journal J. Biol. Chem. (1989) 264:4133-4137
#title The platelet-derived growth factor-inducible KC gene encodes
        a secretory protein related to platelet alpha-granule
        proteins.
#cross-references MUID:89139485
#accession A32954
#molecule_type mRNA
#residues 1-96 #label OQU
#cross-references GB:J04596; NID:g201042; PID:g201043
        JH0081
REFERENCE JH0081
#authors Ryseck, R.P.; MacDonald-Bravo, H.; Mattel, M.G.; Bravo, R.
#journal Exp. Cell Res. (1989) 180:266-275
#title Cloning and sequence of a secretory protein induced by growth
        factors in mouse fibroblasts.
#cross-references MUID:89078502
#accession JH0081
#molecule_type mRNA
#residues 1-96 #label RYS
COMMENT this protein is basic and lacks threonine, phenylalanine, and
        tyrosine.

GENETICS #map_position 5
CLASSIFICATION #superfamily beta-thromboglobulin
KEYWORDS extracellular protein
FEATURE 1-24
        25-96
SUMMARY #domain signal sequence #status predicted #label SIG\
        #product gro-alpha #status predicted #label MAT
        #length 96 #molecular-weight 10254 #checksum 5052

Query Match      65.2%; Score 60; DB 2; Length 96;
Best Local Similarity 72.7%; Pred. No. 3.19e-01;
Matches          8; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

```

Db 73 EACLDPEAPLV 83
Qy 1 EICLDPEAPFL 11

RESULT 14

ENTRY #type complete
TITLE macrophage inflammatory protein 2 precursor - mouse
ORGANISM #formal_name Mus musculus #common_name house mouse
DATE 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 08-Sep-1997
ACCESSIONS JH0200; A32190
REFERENCE JH0200
#authors Tekamp-Olson, P.; Gallegos, C.; Bauer, D.; McClain, J.; Sherry, B.; Fabre, M.; van Deventer, S.; Cerami, A.
#journal J. Exp. Med. (1990) 172:911-919
#title Cloning and characterization of cDNAs for murine macrophage inflammatory protein 2 and its human homologues.
#cross-references MUID:90354792
#accession JH0200

##molecule_type mRNA
##residues 1-100 #label TEK
##cross-references GB:X53798; NID:g53128; PID:g53129
REFERENCE A32190
#authors Wolpe, S.D.; Sherry, B.; Juers, D.; Davatelis, G.; Yurt, R.W.; Cerami, A.
#journal Proc. Natl. Acad. Sci. U.S.A. (1989) 86:612-616
#title Identification and characterization of macrophage inflammatory protein 2.
#cross-references MUID:89098980
#accession A32190

##molecule_type protein

##residues 28-59 #label WOL

CLASSIFICATION #superfamily beta-thromboglobulin

KEYWORDS heparin binding

FEATURE

1-27

28-100

SUMMARY

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86

Qy 2 ICLDPEAPFL 11

##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86

Qy 2 ICLDPEAPFL 11

##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86

Qy 2 ICLDPEAPFL 11

##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86

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##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

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#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

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##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

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#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86

Qy 2 ICLDPEAPFL 11

##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86

Qy 2 ICLDPEAPFL 11

##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86

Qy 2 ICLDPEAPFL 11

##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86

Qy 2 ICLDPEAPFL 11

##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86

Qy 2 ICLDPEAPFL 11

##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86

Qy 2 ICLDPEAPFL 11

##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86

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##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

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Qy 2 ICLDPEAPFL 11

##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86

Qy 2 ICLDPEAPFL 11

##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86

Qy 2 ICLDPEAPFL 11

##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86

Qy 2 ICLDPEAPFL 11

##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86

Qy 2 ICLDPEAPFL 11

##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86

Qy 2 ICLDPEAPFL 11

##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86

Qy 2 ICLDPEAPFL 11

##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86

Qy 2 ICLDPEAPFL 11

##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86

Qy 2 ICLDPEAPFL 11

##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86

Qy 2 ICLDPEAPFL 11

##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10621 #checksum 8720

Query Match 65.2%; Score 60; DB 2; Length 100;

Best Local Similarity 70.0%; Pred. No. 3.19e-01;

Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 77 VCLDPEAPLV 86

Qy 2 ICLDPEAPFL 11

##domain signal sequence #status predicted #label SIG

#product macrophage inflammatory protein 2 #status

experimental #label MAT

#length 100 #molecular-weight 10

W P E R L H
***** (TM)

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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 17:14:32 2000; MasPar time 3.48 Seconds
73.270 Million cell updates/sec

Tabular output not generated.

Title: >US-09-150-813-41
Description: (1-12) from US09150813.pcp
Perfect Score: 92
Sequence: 1 EICLDPEAPFLK 12

Scoring table: PAM 150
Gap 15

Searched: 170751 seqs, 21266608 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: a-geneseq35
1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
14:part14 15:part15 16:part16 17:part17 18:part18
19:part19 20:part20 21:part21 22:part22 23:part23
24:part24 25:part25 26:part26 27:part27 28:part28
29:part29 30:part30 31:part31 32:part32 33:part33
34:part34 35:part35 36:part36 37:part37 38:part38
39:part39

Statistics: Mean 18.372; Variance 54.493; scale 0.337

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES				Pred. No.	
Result No.	Score	Query Match	Description	ID	
1	92	100.0	72 7 R34198	ENA-78.	2.30e-03
2	92	100.0	78 13 R70796	Inflammatory peptide	2.30e-03
3	87	94.6	75 10 R55843	Human GCP-2	9.37e-03
4	87	94.6	113 27 W36449	Human chemokine alpha	9.37e-03
5	87	94.6	114 31 W46286	Human granulocyte che	9.37e-03
6	74	80.4	75 10 R55844	Cattle GCP-2	3.35e-01
7	67	72.8	160 34 W69596	Mouse CKDLR201.1 chem	2.17e+00
8	64	69.6	29 23 W20061	Human macrophage deri	4.77e+00
9	62	67.4	32 13 R70805	Heparanase C-terminal	8.00e+00
10	62	67.4	69 13 R70789	Neutrophil activating	8.00e+00
11	62	67.4	70 16 R86012	Synthetic NAP-2.	8.00e+00
12	62	67.4	70 7 R36775	NAP-2.	8.00e+00
13	62	67.4	75 25 W26467	Neutrophil-activating	8.00e+00
14	62	67.4	75 15 R86011	Synthetic NAP-2v.	8.00e+00
15	62	67.4	81 13 R70788	Beta-thromboglobulin	8.00e+00
16	62	67.4	85 3 P50526	Sequence encoded by s	8.00e+00

17	62	67.4	85 4 R22991	CTAP-III analogues.	8.00e+00
18	62	67.4	85 13 R70786	CTAP-III heparanase.	8.00e+00
19	62	67.4	85 1 R05550	Connective tissue act	8.00e+00
20	62	67.4	94 13 R70787	Platelet basic protei	8.00e+00
21	62	67.4	128 3 R13520	Leukocyte derived gro	8.00e+00
22	62	67.4	128 3 R13521	Leukocyte derived gro	8.00e+00
23	62	67.4	128 1 R05767	Precursor of platelet	8.00e+00
24	62	67.4	128 3 R13519	Leukocyte derived gro	8.00e+00
25	62	67.4	135 2 R7984	CTAP(Leu21)/LamB1-40	8.00e+00
26	60	65.2	68 17 R90929	Neutrophil chemotacti	1.34e+01
27	60	65.2	68 17 R90930	Neutrophil chemotacti	1.34e+01
28	60	65.2	72 39 W1497	Mouse mature KC poly	1.34e+01
29	60	65.2	72 24 W17669	Murine chemokine KC.	1.34e+01
30	60	65.2	72 12 R66697	Mouse KC chemokine.	1.34e+01
31	60	65.2	72 25 W18023	Murine chemokine KC.	1.34e+01
32	60	65.2	100 4 R20528	Murine macrophage inf	1.34e+01
33	60	65.2	100 17 R90928	Neutrophil chemotacti	1.34e+01
34	60	65.2	100 4 R20588	Murine macrophage inf	1.34e+01
35	60	65.2	100 26 R05790	Macrophage derived in	1.34e+01
36	59	64.1	485 13 R71580	Flaveria brownii fruc	1.73e+01
37	59	64.1	485 13 R71579	Solanum tuberosum fru	1.73e+01
38	58	63.0	72 3 R14077	Cytokine and neutroph	2.22e+01
39	57	62.0	310 6 R32195	ADP-L-glycero-D-manno	2.86e+01
40	57	62.0	1198 33 W64384	S. cerevisiae L9470.2	2.86e+01
41	56	60.9	1442 14 R79480	Rat type II collagen	3.68e+01
42	55	59.8	24 11 R58626	Putative glycan bindi	4.72e+01
43	55	59.8	24 35 W70291	Neutrophil activating	4.72e+01
44	54	58.7	426 13 R71583	Raphanus sativus fruc	6.05e+01
45	53	57.6	105 32 W50882	Amino acid sequence o	7.74e+01

ALIGNMENTS

RESULT 1
ID R34198 standard; Protein: 72 AA.

AC R34198;
DT 29-JUL-1993 (first entry)

DE ENA-78.
KW ENA-78; epithelial cell; neutrophil; A549; human; pulmonary; burn;
KW amplify; deficiency; activity; yeast; fungal; viral; infection;
KW inflammatory illness; hyperproliferative skin disease; psoriasis;
KW arthritis; asthma; hematopoietic deficit; chemotherapy; radiation;
KW bone marrow; transplant; wound healing; treatment; infection; PCR.
OS Homo sapiens.
PN EP-538030-A.
PD 21-APR-1993.
PF 15-OCT-1992; 309407.
PR 16-OCT-1991; US-778413.
PA (WALZ/) WALZ A.
PI Walz A;
DR WPI; 93-127862/16.
DR N-PSDB; Q38841.
PT New polypeptide ENA-78 neutrophil-activating factor - for
PT treating neutrophil deficiency e.g. in bacterial, mycoplasma,
PT yeast, fungal and viral infections, inflammatory conditions e.g.
PT psoriasis etc.
PS Disclosure; Fig 5; 28pp; English.

CC This sequence represents polypeptide ENA-78 which is derived from
CC epithelial cells and has the ability to activate neutrophils. ENA-
CC 78 was isolated from cultured stimulated A549 human pulmonary
CC epithelial cells. The DNA encoding this factor was obtained by PCR
CC amplification of cDNA obtained using RNA from A549 cells. ENA-78 can
CC be used to treat neutrophil deficiency, ie. it can be used to
CC increase the number or enhance the activity to give a clinical
CC improvement in yeast, fungal or viral infections. It can be used in
CC inflammatory illnesses such as hyperproliferative skin diseases, such
CC as psoriasis, arthritic conditions and asthma, or in conditions of
CC abnormally low neutrophil count and/or generalised low neutrophil
CC level. ENA-78 may be used in the treatment of hematopoietic deficits
CC arising from chemotherapy or radiation therapy, for enhancing the
CC success of bone marrow transplants and for wound healing, burn
CC treatment and the treatment of bacterial infection.
SQ Sequence 72 AA;

Query Match 100.0%; Score 92; DB 7; Length 72;
 Best Local Similarity 100.0%; Pred. No. 2.30e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 47 eicldpeapflk 58
 :|||||
 QY 1 EICLDPEAPFLK 12

RESULT 2
 ID R70796 standard; Protein; 78 AA.
 AC R70796;
 DT 29-AUG-1995 (first entry)
 DE Inflammatory peptide ENA-78.
 KW Inflammatory peptide; ENA-78; heparanase; heparin; heparan sulfate;
 KW arthritis; restenosis; cancer; wound healing.
 OS Homo sapiens.
 PN WO9504158-A.
 PD 09-FEB-1995.
 PF 26-JUL-1994; U08207.
 PR 29-JUL-1993; US-099866.
 PR 13-OCT-1993; US-136117.
 FA (UPJO) UPJOHN CO.
 PI Hoogwerf AJ, Ledbetter SR;
 DR WPI; 95-082239/11.
 DR N-PSDB; O85366.
 PT Screening for cpds. with anti-heparanase activity - by detecting
 PT inhibition of heparin or heparan sulphate degradation,
 PT potentially useful for treating arthritis, restenosis, cancer.
 PS Claim 12; Page 43; 60pp; English.
 CC Purified heparanases, prepared under reducing conditions and
 CC activated with transglutaminase, are given in R70786-804. Most
 CC are prepared by reverse transcription of mRNA from activated human
 CC leukocytes, then cloning of the cDNA into pVL1392 baculovirus
 CC vector, and expression in Sf9 cells in the presence of reduced
 CC glutathione and dithiothreitol.
 SQ Sequence 78 AA;

Query Match 100.0%; Score 92; DB 13; Length 78;
 Best Local Similarity 100.0%; Pred. No. 2.30e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 53 eicldpeapflk 64
 :|||||
 QY 1 EICLDPEAPFLK 12

RESULT 3
 ID R55843 standard; protein; 75 AA.
 AC R55843;
 DT 09-NOV-1994 (first entry)
 DE Human GCP-2.
 KW GCP-2; granulocyte chemotactic protein-2; protease;
 KW antiinflammatory; osteosarcoma; MG-63.
 OS Homo sapiens.
 PN WO9412537-A.
 PD 09-JUN-1994.
 PF 26-NOV-1993; E03330.
 PR 27-NOV-1992; US-982539.
 PA (UYLE-) UNIV LEUVEN REGA INST.
 PI Proost P, Van Damme J;
 DR WPI; 94-20200/24.
 PT Pure mammalian granulocyte chemotactic protein-2 - which
 PT stimulates granulocytes to secrete protease, used to develop
 PT prods. for treating inflammatory conditions
 PS Disclosure; Page 29; 54pp; English.
 CC Human GCP-2 was isolated from human MG-63 osteosarcoma (ATCC CRL
 CC 1427) cells, and cattle GCP-2 (R53844) from MDBK (ATCC CRL 6071)
 CC cells. Naturally-occurring N-terminally truncated variants of human
 CC GCP-2 were also isolated and sequenced (R55845-47, R55849). A
 CC conserved region within mammalian GCP-2 is shown in sequence R55848.
 CC Expression of DNA encoding GCP-2 in a host cell will provide

CC recombinant protein of use as an antiinflammatory.
 SQ Sequence 75 AA;

Query Match 94.6%; Score 87; DB 10; Length 75;
 Best Local Similarity 83.3%; Pred. No. 9.37e-03;
 Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 52 qvcldpeapflk 63
 :|||||
 QY 1 EICLDPEAPFLK 12

RESULT 4
 ID W36449 standard; Protein; 113 AA.
 AC W36449;
 DT 08-APR-1998 (first entry)
 DE Human chemokine alpha-3.
 KW Human; chemokine alpha-3; CK alpha-3; treatment; tumour;
 KW chronic infection; leukaemia; T-cell mediated autoimmune disease;
 KW parasitic infection; psoriasis; asthma; allergy; haematopoiesis;
 KW growth factor; angiogenesis; wound healing.
 OS Homo sapiens.
 PN WO9735027-A1.
 PD 25-SEP-1997.
 PF 18-MAR-1996; U03686.
 PR 18-MAR-1996; WO-U03686.
 PA (HUMA-) HUMAN GENOME SCI INC.
 PI Li H, Ni J, Su JY;
 DR WPI; 97-480232/44.
 DR N-PSDB; T91990.
 PT Polynucleotide(s) encoding human chemokine alpha-3 - used to treat
 PT tumours, chronic infections, autoimmune diseases, parasitic
 PT infections, psoriasis, asthma etc.
 PS Claim 13; Fig 1; 69pp; English.
 CC The present sequence is human chemokine alpha-3 (CK alpha-3),
 CC which can be used to treat tumours, chronic infections, leukaemia,
 CC T-cell mediated autoimmune diseases, parasitic infections,
 CC psoriasis, asthma and allergy. It can also be used to regulate
 CC haematopoiesis, stimulate growth factor activity, inhibit
 CC angiogenesis and promote wound healing.
 SQ Sequence 113 AA;

Query Match 94.6%; Score 87; DB 27; Length 113;
 Best Local Similarity 83.3%; Pred. No. 9.37e-03;
 Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 89 qvcldpeapflk 100
 :|||||
 QY 1 EICLDPEAPFLK 12

RESULT 5
 ID W46286 standard; Protein; 114 AA.
 AC W46286;
 DT 06-AUG-1998 (first entry)
 DE Human granulocyte chemotactic protein 2 variant.
 KW Human; granulocyte chemotactic protein 2 variant; NGCP; leukaemia;
 KW chemokine; alpha-intercrine; chemo-attraction; immune deficiency;
 KW cancer; immune response.
 OS Homo sapiens.
 PN WO9811227-A1.
 PD 19-MAR-1998.
 PF 10-SEP-1997; U16034.
 PR 12-SEP-1996; US-713288.
 PA (INCY-) INCYTE PHARM INC.
 PI Bandman O, Coleman R, Murry LE;
 DR WPI; 98-207388/18.
 DR N-PSDB; V26372.
 PT Human granulocyte chemotactic protein 2 - useful for diagnosis and
 PT treatment of e.g. leukaemia
 PS Claim 1; Fig 1A-B; 59pp; English.
 CC The present sequence represents a novel human granulocyte chemotactic
 CC protein 2 (NGCP) variant. The protein, which belongs to the CXC

CC family of chemokines, has similarity to other alpha-interferons
 CC involved in the chemo-attraction and activation of leukocytes. The
 CC nucleic acid sequence encoding NGCP and the protein can be used in
 CC the diagnosis and treatment of diseases such as leukaemia and other
 CC cancer, immune deficiencies or excessive immune responses.
 SQ Sequence 114 AA;

Query Match 94.6%; Score 87; DB 31; Length 114;
 Best Local Similarity 83.3%; Pred. No. 9.37e-03;
 Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 89 qvcldeapflk 100
 :|||||||
 QY 1 EICLDPEAPFLK 12

RESULT 6
 ID R55844 standard; protein; 75 AA.
 AC R55844; 1994 (first entry)
 DE Cattle GCP-2.
 KW GCP-2; granulocyte chemotactic protein-2; protease;
 KW antiinflammatory; MDBK.
 OS Bos taurus.
 PN W09A12537-A.
 PD 09-JUN-1994. E03330.
 PF 26-NOV-1993; US-982539.
 PR 27-NOV-1992; US-982539.
 PA (UYLE-) UNIV LEUVEN REGA INST.
 PI Proost P, Van Damme J;
 DR WPI: 94-200200/24.
 PT Pure mammalian granulocyte chemotactic protein-2 - which
 PT stimulates granulocytes to secrete protease, used to develop
 PT prods. for treating inflammatory conditions
 PS Disclosure; Page 29; 54pp; English.
 CC Human GCP-2 (R55843) was isolated from human MG-63 osteosarcoma
 CC (ATCC CRL 1427) cells, and cattle GCP-2 from MDBK (ATCC CRL 6071)
 CC cells. Naturally-occurring N-terminally truncated variants of human
 CC GCP-2 were also isolated and sequenced (R55845-47, R55849). A
 CC conserved region within mammalian GCP-2 is shown in sequence R55848.
 CC Expression of DNA encoding GCP-2 in a host cell will provide
 CC recombinant protein of use as an antiinflammatory.
 SQ Sequence 75 AA;

Query Match 80.4%; Score 74; DB 10; Length 75;
 Best Local Similarity 75.0%; Pred. No. 3.35e-01;
 Matches 9; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 52 evcldeapflk 63
 :|||||||
 QY 1 EICLDPEAPFLK 12

RESULT 7
 ID W69596 standard; protein; 160 AA.
 AC W69596;
 DT 16-OCT-1998 (first entry)
 DE Mouse CXCLR201.1 chemokine protein.
 KW Mouse. CXCLR201.1; chemokine; G-protein coupled receptor; GPCR;
 KW 7 transmembrane receptor; inflammation; asthma; antiviral;
 KW abnormal cell proliferation; regeneration; degeneration; atrophy.
 OS Mus sp.
 FH Key
 FT Peptide
 FT /label= signal
 FT Protein
 FT /label= CXCLR201.1
 FT W09831810-A2.
 PN 23-JUL-1998.
 PD 20-JAN-1998; U00218.
 PR 21-JAN-1997; US-786624.
 PA (SCHE) SCHERING CORP.
 PI Capone M, Gorman DM, Hedrick JA, Huffine CF, Rossi DL,

PI Vicari A, Zlotnik A;
 DR WPI: 98-414108/35.
 DR N-PSDB: V40371.
 PT Pure or recombinant chemokine CXCLR201.1 - useful, e.g. for treating
 PT inflammation and as antiviral agents
 PS Claim 1; Page 60; 77pp; English.
 CC The present sequence represents mouse CXCLR201.1 chemokine protein
 CC which comprises a plurality of epitopes. Host cells containing vectors
 CC comprising a nucleotide sequence encoding the protein are used to
 CC produce recombinant protein. Treatment of a cell, particularly neuron,
 CC macrophage or lymphocyte, carrying a G-protein coupled receptor (GPCR)
 CC or a receptor responsive to CXCLR201.1 chemokine protein, with an
 CC (ant)agonist is used to control physiological development, e.g.
 CC alteration of calcium ion influx, a chemoattractant response, morphology,
 CC phosphoinositide lipid turnover or an antiviral response. Nucleotide
 CC sequences the CXCLR201.1 protein, or GPCRs, are useful as primers or
 CC probes, e.g. for detecting and isolating related sequences and for
 CC expressing antigenic peptides. Antibodies (Ab) directed against the
 CC CXCLR201.1 protein and GPCRs are used to detect or purify the proteins;
 CC diagnostically (e.g. for developmental abnormalities); in screening for
 CC potential drugs; to inhibit chemokine/receptor activation; (when coupled
 CC to a toxin or radioisotope) for killing specific cells, and to raise
 CC anti-idiotypic antibodies. CXCLR201.1 protein and GPCRs and compounds
 CC which bind them can be used to treat inflammation, e.g. asthma; as
 CC antiviral agents, and to treat abnormal cell proliferation, regeneration,
 CC degeneration and atrophy. Therapeutic agents are administered orally, by
 CC injection and rectally.
 SQ Sequence 160 AA;

Query Match 72.8%; Score 67; DB 34; Length 160;
 Best Local Similarity 72.7%; Pred. No. 2.17e+00;
 Matches 8; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 65 icldpdapwvk 75
 :|||||||
 QY 2 ICLDPEAPFLK 12

RESULT 8
 ID W20061 standard; protein; 69 AA.
 AC W20061;
 DT 11-SEP-1997 (first entry)
 DE Human macrophage derived chemokine analogue.
 DE MDC; macrophage derived chemokine; C-C; Cys-Cys; Crohn's disease;
 KW rheumatoid arthritis; chemotaxis; fibroblast proliferation;
 KW wound healing; angiogenesis; inflammation.
 OS Synthetic.
 PN W09640923-A1.
 PD 19-DEC-1996.
 PF 07-JUN-1996; U10114.
 PR 07-JUN-1995; US-479620.
 PR 16-NOV-1995; US-558658.
 FA (ICOS-) ICOS CORP.
 PI Godiska R, Gray PW;
 DR WPI: 97-052324/05.
 PT Macrophage derived chemokine (MDC) and analogues - used in the
 PT treatment of inflammatory diseases, MDC antibodies used to treat
 PT Crohn's disease, rheumatoid arthritis, etc.
 PS Claim 25; Page 84; 106pp; English.
 CC A new macrophage derived chemokine, MDC, a member of the C-C
 CC (Cys-Cys) subfamily of cytokines has been isolated. MDC and it's
 CC analogues may be used in the treatment of inflammatory diseases
 CC especially diseases characterised by monocyte chemotaxis towards a
 CC site of inflammation. MDC and it's analogues also induce fibroblast
 CC proliferation having a positive effect in wound healing and
 CC angiogenesis. They may prove to be clinically important in the
 CC treatment of tumours, by directly or indirectly inhibiting tumour
 CC formation. Antibodies directed against MDC and its analogues may be
 CC used in the treatment of Crohn's disease, rheumatoid arthritis and
 CC atherosclerosis. Probes and/or primers for the identification of MDC
 CC encoding sequences can be derived from MDC encoding sequences.
 SQ Sequence 69 AA;

Query Match 59.6%; Score 64; DB 23; Length 69;
 Best Local Similarity 66.7%; Pred. No. 4.77e+00;
 Matches 8; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Db 50 eicadprvpylk 61
 |||||:|:|
 QY 1 EICLDEAPFLK 12

RESULT 9
 ID R70805 standard; Protein; 32 AA.
 AC R70805;
 DT 29-AUG-1995 (first entry)
 DE Heparanase C-terminal peptide.
 KW Heparanase; heparin; heparan sulfate; arthritis; restenosis;
 KW cancer; wound healing.
 OS Synthetic.
 PN W09504158-A.
 PD 09-FEB-1995.
 PF 26-JUL-1994; U08207.
 PR 29-JUL-1993; US-099866.
 PR 13-OCT-1993; US-136117.
 PA (UPJO) UPJOHN CO.
 PI Hoogwerf AJ, Ledbetter SR;
 DR WPI: 95-082239/11.
 DR N-PSDB; Q85374.
 PT Screening for cnds. with anti-heparanase activity - by detecting
 PT inhibition of heparin or heparan sulphate degradation,
 PT potentially useful for treating arthritis, restenosis, cancer.
 PS Claim 17; Page 34; 60pp; English.
 CC Purified heparanases, prepared under reducing conditions and
 CC activated with transglutaminase, are given in R70786-804. In
 CC peptide synthesis, a C-terminal peptide (R70805, encoded by cDNA
 CC sequence Q85374) based on sequences for CTAP-III, platelet basic
 CC protein, beta-thromboglobulin and NAP-2, and an N-terminal peptide
 CC (R70809) based on CTAP-III and platelet basic protein were
 CC synthesized.
 CC Sequence 32 AA;

Query Match 67.4%; Score 62; DB 13; Length 32;
 Best Local Similarity 72.7%; Pred. No. 8.00e+00;
 Matches 8; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 16 icldpdaprik 26
 |||||:|:|
 QY 2 ICLDPEAPFLK 12

RESULT 10
 ID R70789 standard; Protein; 69 AA.
 AC R70789;
 DT 29-AUG-1995 (first entry)
 DE Neutrophil activating peptide-2.
 KW Neutrophil activating peptide-2.
 KW heparan sulfate; arthritis; restenosis; cancer; wound healing.
 OS Homo sapiens.
 PN W09504158-A.
 PD 09-FEB-1995.
 PF 26-JUL-1994; U08207.
 PR 29-JUL-1993; US-099866.
 PR 13-OCT-1993; US-136117.
 PA (UPJO) UPJOHN CO.
 PI Hoogwerf AJ, Ledbetter SR;
 DR WPI: 95-082239/11.
 DR N-PSDB; Q85359.
 PT Screening for cnds. with anti-heparanase activity - by detecting
 PT inhibition of heparin or heparan sulphate degradation,
 PT potentially useful for treating arthritis, restenosis, cancer.
 PS Claim 5; Page 36; 60pp; English.
 CC Purified heparanases, prepared under reducing conditions and
 CC activated with transglutaminase, are given in R70786-804. Most
 CC are prepared by reverse transcription of mRNA from activated human
 CC leukocytes, then cloning of the cDNA into pVL1392 baculovirus

CC vector, and expression in Sf9 cells in the presence of reduced
 CC glutathione and dithiothreitol.
 SQ Sequence 69 AA;

Query Match 67.4%; Score 62; DB 13; Length 69;
 Best Local Similarity 72.7%; Pred. No. 8.00e+00;
 Matches 8; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 45 icldpdaprik 55
 |||||:|:|
 QY 2 ICLDPEAPFLK 12

RESULT 11
 ID R86012 standard; peptide; 70 AA.
 AC R86012;
 DT 31-MAY-1996 (first entry)
 DE Synthetic NAP-2.
 KW NAP-2V; NAP-2; variant; neutrophil-activating peptide; bone growth;
 KW cleavage product; human; bone stimulating factor; osteoporosis;
 KW platelet alpha-granule component platelet basic protein; PBp.
 OS Synthetic.
 PN W09528172-A1.
 PD 26-OCT-1995.
 PF 11-APR-1995; CA0205.
 PR 18-APR-1994; US-229009.
 PA (OSTE-) OSTEOPHARM LTD.
 PI Tam CS;
 DR WPI: 95-373633/48.
 PT Stimulating bone growth in mammals with neutrophil activating
 PT peptide(s) - partic. for diagnosis and treatment of osteoporosis
 PS Claim 1; Page 23; 45pp; English.
 CC The sequences given in R86011-12 represent NAP-2V and NAP-2 which
 CC are a variant and the wild type form of the invention
 CC peptide. These peptides were used in the method of the invention
 CC for increasing bone growth. NAP-2V is a cleavage product of the
 CC platelet alpha-granule component platelet basic protein (PBp). It
 CC is related to NAP-2 in that NAP-2V has an additional 5 amino acids
 CC at its N-terminal. The N-terminal of NAP-2V resembles the N-
 CC terminus of human bone stimulating factor. These peptides are
 CC useful in the diagnosis and treatment of osteoporosis.
 CC Sequence 70 AA;

Query Match 67.4%; Score 62; DB 16; Length 70;
 Best Local Similarity 72.7%; Pred. No. 8.00e+00;
 Matches 8; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 46 icldpdaprik 56
 |||||:|:|
 QY 2 ICLDPEAPFLK 12

RESULT 12
 ID R36775 standard; peptide; 70 AA.
 AC R36775;
 DT 07-SEP-1993 (first entry)
 DE NAP-2.
 KW Neutrophil-activating peptide-2; NAP-2; cathepsin D; cleavage;
 KW beta-thromboglobulin; precursor; alpha-granules; blood; platelet;
 KW connective-tissue-activating peptide III; CTAP-III; analog; clot;
 KW platelet basic protein; PRP.
 OS Synthetic.
 PN W09309794-A.
 PD 27-MAY-1993.
 PF 12-NOV-1992; U09663.
 PR 15-NOV-1991; US-792990.
 PA (UYPE-) UNIV PENNSYLVANIA.
 PI Gewirtz AM, Poncz M;
 DR WPI: 93-182235/22.
 PT Suppression of megakaryocytopoiesis - by administration of
 PT neutrophil activating peptide-2
 PS Disclosure; Page 17; 24pp; English.
 CC This sequence represents the amino acid sequence of neutrophil-

CC activating peptide-2 (NAP-2). NAP-2 is a potent neutrophil
 CC activating agent produced by the cathepsin D-mediated cleavage of
 CC the eleven N-terminal amino acids of beta-thromboglobulin. It may
 CC also be generated by the cleavage of two inactive precursors,
 CC connective-tissue-activating peptide III (CTAP-III) and platelet
 CC basic protein (PRP), which are stored in the alpha-granules of blood
 CC platelets. NAP-2 or NAP-2 analogs, with homology of >80%, may be
 CC used to lower blood levels of circulating platelets and to reduce
 CC the clot forming abilities of these platelets.
 SQ Sequence 70 AA;

Query Match 67.4%; Score 62; DB 7; Length 70;
 Best Local Similarity 72.7%; Pred. No. 8.00e+00;
 Matches 8; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 46 icldpdaprik 56
 |||||:|:|
 QY 2 ICLDPEAPFLK 12

RESULT 13
 ID W26467 standard; Protein; 75 AA.
 AC W26467;
 DT 31-DEC-1997 (first entry)
 DE Neutrophil-activating peptide variant NAP-2V.
 KW Neutrophil-activating peptide-2; NAP-2V; bone stimulating factor;
 KW osteoporosis; therapy.
 OS Synthetic.
 PN W09712036-A2.
 PD 03-APR-1997.
 PF 26-SEP-1996; CA0653.
 PR 26-SEP-1995; US-004314.
 PA (OSTE-) OSTEOPHARM LTD.
 PI Tam CS;
 PI WPI; 97-235534/21.
 DR Neutrophil-activating peptide-2 variants which increase or promote
 PT mammalian bone growth - useful for prevention or treatment of bone
 PT reduction related diseases, especially osteoporosis
 PS Claim 1; Page 21; 43pp; English.
 CC This polypeptide comprises a variant, termed NAP-2V, of neutrophil-
 CC activating peptide (NAP-2). Novel claimed polypeptides (see also
 CC W26468-70) that promote bone growth in mammals comprise NAP-2V
 CC with (a) from 6-12 amino acid (AA) residues deleted from the
 CC N-terminus, (b) 7-49 AA deleted from the C-terminus, or (c) both
 CC (a) and (b), and contain no cysteine residues or at least 2
 CC cysteine residues, preferably at positions 10 and 12. Also claimed
 CC are: a chimeric bone stimulating factor comprising such
 CC polypeptides; an antibody which binds to the polypeptides; DNA
 CC fragments useful for recombinant production of the polypeptides;
 CC and vectors comprising the DNA. The polypeptides are useful in the
 CC prevention and treatment of bone reduction related disease, for
 CC promotion of and increasing bone growth in mammals, especially for
 CC the treatment of osteoporosis (claimed).
 SQ Sequence 75 AA;

Query Match 67.4%; Score 62; DB 25; Length 75;
 Best Local Similarity 72.7%; Pred. No. 8.00e+00;
 Matches 8; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 51 icldpdaprik 61
 |||||:|:|
 QY 2 ICLDPEAPFLK 12

RESULT 14
 ID R86011 standard; peptide; 75 AA.
 AC R86011;
 DT 31-MAY-1996 (first entry)
 DE Synthetic NAP-2V.
 KW NAP-2V; NAP-2; variant; neutrophil-activating peptide; bone growth;
 KW cleavage product; human; bone stimulating factor; osteoporosis;
 KW platelet alpha-granule component platelet basic protein; PAP.
 OS Synthetic.

PN W09528172-A1.
 PD 26-OCT-1995.
 PF 11-APR-1995; CA0205.
 PR 18-APR-1994; US-229009.
 PA (OSTE-) OSTEOPHARM LTD.
 PI Tam CS;
 PI WPI; 95-373633/48.
 DR Stimulating bone growth in mammals with neutrophil activating
 PT peptide(s) - partic. for diagnosis and treatment of osteoporosis
 PS Claim 1; Page 23; 45pp; English.
 CC The sequences given in R86011-12 represent NAP-2V and NAP-2 which
 CC are a variant and the wild type form of neutrophil-activating
 CC peptide. These peptides were used in the method of the invention
 CC for increasing bone growth. NAP-2V is a cleavage product of the
 CC platelet alpha-granule component platelet basic protein (PBP). It
 CC is related to NAP-2 in that NAP-2V has an additional 5 amino acids
 CC at its N-terminal. The N-terminal of NAP-2V resembles the N-
 CC terminus of human bone stimulating factor. These peptides are
 CC useful in the diagnosis and treatment of osteoporosis.
 SQ Sequence 75 AA;

Query Match 67.4%; Score 62; DB 16; Length 75;
 Best Local Similarity 72.7%; Pred. No. 8.00e+00;
 Matches 8; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

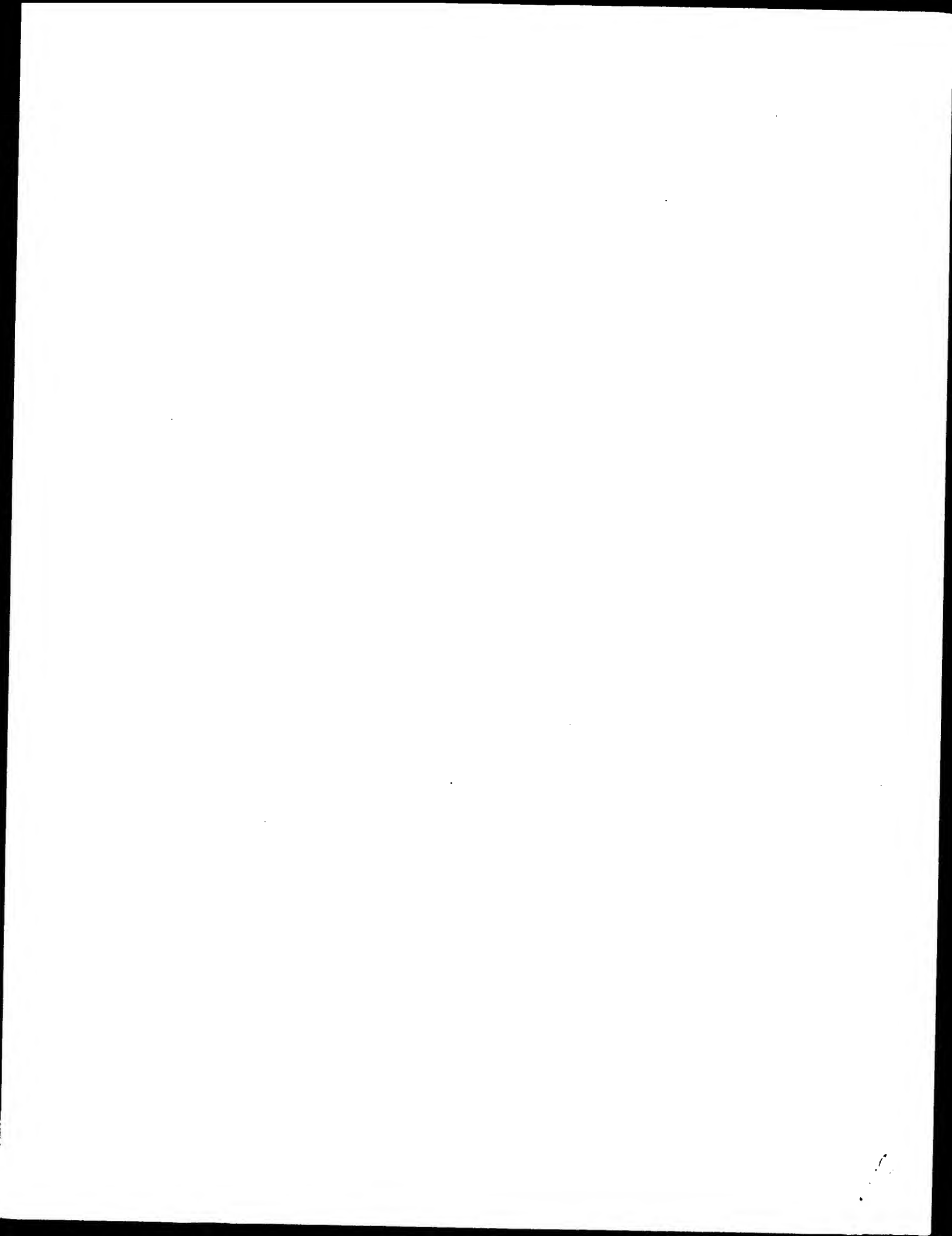
Db 51 icldpdaprik 61
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 QY 2 ICLDPEAPFLK 12

RESULT 15
 ID R70788 standard; Protein; 81 AA.
 AC R70788;
 DT 29-AUG-1995 (first entry)
 DE Beta-thromboglobulin heparanase.
 KW Beta-thromboglobulin; heparanase; heparin; heparan sulfate;
 KW arthritis; restenosis; cancer; wound healing.
 OS Homo sapiens.
 PN W09504158-A.
 PD 09-FEB-1995.
 PF 26-JUL-1994; U08207.
 PR 29-JUL-1993; US-099866.
 PR 13-OCT-1993; US-136117.
 PA (UPJO) UPJOHN CO.
 PI Hoogwerf AJ, Ledbetter SR;
 DR WPI; 95-082239/11.
 N-PSDB; Q85358.
 PT Screening for cpds. with anti-heparanase activity - by detecting
 PT inhibition of heparin or heparan sulphate degradation,
 PT potentially useful for treating arthritis, restenosis, cancer.
 PS Claim 5; Page 35; 60pp; English.
 CC Purified heparanases, prepared under reducing conditions and
 CC activated with transglutaminase, are given in R70786-804. Most
 CC are prepared by reverse transcription of mRNA from activated human
 CC leukocytes, then cloning of the cDNA into pVL1392 baculovirus
 CC vector, and expression in Sf9 cells in the presence of reduced
 CC glutathione and dithiothreitol.
 SQ Sequence 81 AA;

Query Match 67.4%; Score 62; DB 13; Length 81;
 Best Local Similarity 72.7%; Pred. No. 8.00e+00;
 Matches 8; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 57 icldpdaprik 67
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 QY 2 ICLDPEAPFLK 12

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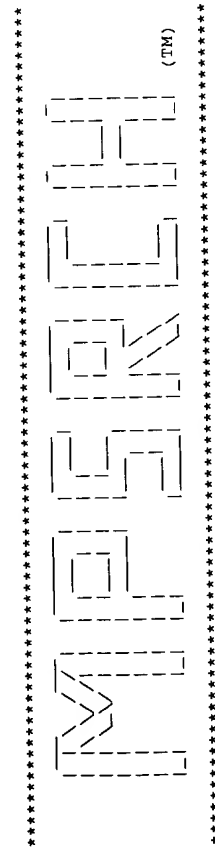


21 60 64.5 949 5 P90956 1.17e+00
22 60 64.5 2180 5 O01768 1.17e+00
23 59 63.4 104 13 Q73912 1.81e+00
24 59 63.4 321 2 O69128 1.81e+00
25 58 62.4 93 4 O00626 2.79e+00
26 58 62.4 97 6 O62812 2.79e+00
27 58 62.4 108 11 O70460 2.79e+00
28 58 62.4 448 2 P95531 2.79e+00
29 57 61.3 101 13 Q93442 4.29e+00
30 56 60.2 96 13 Q90825 6.55e+00
31 56 60.2 399 14 Q88409 6.55e+00
32 56 60.2 629 5 P91819 6.55e+00
33 56 60.2 857 13 P79708 1.51e+01
34 54 58.1 158 5 Q26381 1.51e+01
35 54 58.1 358 14 Q88520 1.51e+01
36 54 58.1 489 10 O49123 1.51e+01
37 54 58.1 801 6 O62817 1.51e+01
38 54 58.1 801 6 O77619 1.51e+01
39 54 58.1 879 5 O76978 1.51e+01
40 54 58.1 1089 5 Q26155 1.51e+01
41 54 58.1 1142 4 Q14324 1.51e+01
42 54 58.1 4199 2 P74440 1.51e+01
43 53 57.0 106 2 Q49811 2.27e+01
44 53 57.0 339 5 O17996 2.27e+01
45 53 57.0 570 11 Q61093 2.27e+01

ALIGNMENTS

RESULT 1 PRELIMINARY; PRT; 80 AA.
ID Q14745
AC Q14745;
DT 01-NOV-1996 (TREMBREL. 01, CREATED)
DT 01-NOV-1996 (TREMBREL. 01, LAST SEQUENCE UPDATE)
DT 01-JAN-1999 (TREMBREL. 09, LAST ANNOTATION UPDATE)
DE LD78 ALPHA BETA PRECURSOR (FRAGMENT).
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-BRAIN;
RA ISHIZUKA K., IGATA-YI R., NARUSE K., NAKASHIMA H., OHUCHI K.,
RA KATSURAGI S., KIN Y., OHMOTO Y., NOMIYAMA H., IIO M., MIURA R.,
RA MIYAKAWA T.;
RL SUBMITTED (AUG-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; D63785; D1010501; -;
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; i18; 1.
KW SIGNAL.
FT NON_TER 1 16 POTENTIAL.
FT SIGNAL <1 16 LD78 ALPHA BETA.
FT CHAIN 17 >80
FT NON_TER 80 80
SQ SEQUENCE 80 AA; 8857 MW; 3F87F1C6 CRC32;
Query Match 100.0%; Score 93; DB 4; Length 80;
Best Local Similarity 100.0%; Pred. No. 9.64e-08;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 65 QVCAADPSEEWVQ 76
QY 1 QVCAADPSEEWVQ 12
RESULT 2 PRELIMINARY; PRT; 120 AA.
ID O15467;
AC O15467;
DT 01-JAN-1998 (TREMBREL. 05, CREATED)
DT 01-JAN-1998 (TREMBREL. 05, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBREL. 08, LAST ANNOTATION UPDATE)
DE IL-10-INDUCIBLE CHEMOKINE.
GN ILINCK OR SCYAL16.



Release 3.1A John F. Collins, Biocomputing Research Unit.
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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm
Run on: Fri Feb 4 17:22:26 2000; MasPar time 5.28 Seconds
124.159 Million cell updates/sec
Tabular output not generated.

Title: >US-09-150-813-42
Description: (1-12) from US09150813.pep
Perfect Score: 93
Sequence: 1 QVCAADPSEEWVQ 12
Scoring table: PAM 150
Gap 15

Searched: 179066 seqs, 54579741 residues
Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: sprenb19
1:sp_archaea 2:sp_bacteria 3:sp_fungi 4:sp_human
5:sp_invertebrate 6:sp_mammal 7:sp_mhc 8:sp_organelle
9:sp_phase 10:sp_plant 11:sp_rodent 12:sp_unclassified
13:sp_vertebrate 14:sp_virus
Statistics: Mean 25.308; Variance 35.370; scale 0.716

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES						
Result No.	Score	Query Match	Length	ID	Description	Pred. No.
1	93	100.0	80	4	Q14745	9.64e-08
2	79	84.9	120	4	LD78 ALPHA BETA PRECUR	2.76e-03
3	73	78.5	95	14	IL-10-INDUCIBLE CHEMOK	1.41e-04
4	72	77.4	119	4	ORF K6.	4.48e-03
5	68	73.1	109	4	MPIF-2.	3.03e-02
6	68	73.1	133	11	CXC CHEMOKINE PRECURSO	3.03e-02
7	68	73.1	133	11	BETA CHEMOKINE EXODUS-	4.85e-02
8	67	72.0	134	4	SMALL INDUCIBLE CYTOKI	4.85e-02
9	67	72.0	134	4	VMIP-1b.	4.85e-02
10	67	72.0	134	4	BETA CHEMOKINE EXODUS-	4.85e-02
11	67	72.0	395	11	NEUROTACTIN.	4.85e-02
12	66	71.0	395	11	FRACTALKINE.	4.85e-02
13	65	69.9	97	11	CC CHEMOKINE ST38 PREC	7.73e-02
14	64	68.8	91	4	RANTES PRECURSOR.	1.23e-01
15	63	67.7	397	4	CX3C CHEMOKINE PRECURS	1.94e-01
16	62	66.7	203	14	ECO Q PROTEIN (FRAGMEN	3.06e-01
17	61	65.6	96	11	CC CHEMOKINE EXODUS.	4.80e-01
18	60	64.5	92	11	CC CHEMOKINE ABCD-1.	7.50e-01
19	60	64.5	95	4	CHEMOKINE EXODUS.	1.17e+00
20	60	64.5	97	13	LYMPHOTACTIN PRECURSOR	1.17e+00
			552	5	RADIAL SPOKEHEAD.	1.17e+00

OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA: METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
 RN CATARRHINI; HOMINIDAE; HOMO.
 [1]
 RP SEQUENCE FROM N.A.
 RA HEDRICK J.A., HELMS A., GORMAN D., ZLOTNIK A.;
 RL SUBMITTED (NOV-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 [2]
 RP SEQUENCE FROM N.A.
 RA SHOUAI K., HISHIMA K., FUKUDA S., IIO M., MIURA R., IMAI T.,
 RA YOSHIE O., NOMIYAMA H.;
 RL BIOCHIM. BIOPHYS. ACTA 0:0-0(1998).
 [3]
 RP SEQUENCE FROM N.A.
 RA NOMIYAMA H.;
 RL "Structure of a region of 181 kb containing five CC chemokine
 genes";
 RT SUBMITTED (AUG-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
 [4]
 RP SEQUENCE FROM N.A.
 RA YOUN B.S., ZHANG S., BROXMEYER H.E., ANTOL K., FRASER M.J. JR.,
 RA HANGOC G., KWON B.S.;
 RL "Isolation and characterization of LMC, a novel lymphocyte and
 monocyte chemoattractant human CC chemokine, with myelosuppressive
 activity";
 RT BIOCHEM. BIOPHYS. RES. COMMUN. 247:217-222(1998).
 DR EMBL; U91746; G2581781;
 DR EMBL; AB007454; D1024963;
 DR EMBL; AF088219; G3719365;
 DR EMBL; AF055467; G3395776;
 DR PFAM; PF00048; i18; 1.
 KW SIGNAL.
 SQ SEQUENCE 120 AA; 13600 MW; A079DF66 CRC32;
 Query Match 84.9%; Score 79; DB 4; Length 120;
 Best Local Similarity 50.0%; Pred. No. 1.41e-04;
 Matches 6; Conservative 6; Mismatches 0; Indels 0; Gaps 0;
 Db 74 EVCNPNDDWVQ 85
 QY 1 QVCADPSEEWVQ 12
 RESULT 3
 ID Q98158 PRELIMINARY; PRT; 95 AA.
 AC Q98158; 012569;
 DT 01-FEB-1997 (TREMBLREL. 02, CREATED)
 DT 01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
 DE ORF K6.
 OS KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS.
 OC VIRUSES; DSDNA VIRUSES, NO RNA STAGE; HERPESVIRIDAE;
 OC GAMMAHERPESVIRINAE; RHADINOVIRUS.
 [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 97094384.
 RA MOORE P.S., BASHOFF C., WEISS R.A., CHANG Y.;
 RT "Molecular mimicry of human cytokine and cytokine response pathway
 genes by KSHV";
 RL SCIENCE 274:1739-1744(1996).
 [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 97121480.
 RA RUSSO J.J., BOHENZKY R.A., CHIEN M.C., CHEN J., YAN M., MADDALENA D.,
 RA PARRY J.P., PERUZZI D., EDELMAN I.S., CHANG Y., MOORE P.S.;
 RT "Nucleotide sequence of the Kaposi sarcoma-associated herpesvirus
 (HHV8)";
 RL PROC. NATL. ACAD. SCI. U.S.A. 93:14862-14867(1996).
 [3]
 RP SEQUENCE FROM N.A.
 RA RUSSO J.J., BOHENZKY R.A., CHIEN M.C., CHEN J., YAN M., MADDALENA D.,

RA PARRY J.P., PERUZZI D., EDELMAN I.S., CHANG Y., MOORE P.S.;
 RL SUBMITTED (OCT-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 [4]
 RP SEQUENCE FROM N.A.
 RA NICHOLAS J., RUVOLO V.R., BURNS W.H., SANDFORD G., WAN X., CIUFO D.,
 RA HENDRICKSON S., GUO H.G., HAYWARD G.S., REITZ M.S.;
 RL SUBMITTED (NOV-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 [5]
 RP SEQUENCE FROM N.A.
 RA RUSSO J.J., BOHENZKY R.A., CHIEN M.C., CHEN J., YAN M., MADDALENA D.,
 RA PARRY J.P., PERUZZI D., EDELMAN I.S., CHANG Y., MOORE P.S.;
 RL SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 [6]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 97296220.
 RA NEIPEL F., ALBRECHT J.C., FLECKENSTEIN B.;
 RT "Cell-homologous genes in the Kaposi's sarcoma-associated
 rhadinovirus human herpesvirus 8: determinants of its
 pathogenicity";
 RL J. VIROL. 71:4187-4192(1997).
 [7]
 RP SEQUENCE FROM N.A.
 RA SUN R., LIN S.-F., MILLER G.;
 RL SUBMITTED (SEP-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; U75698; G1718266;
 DR EMBL; U74585; G1658273;
 DR EMBL; U93872; G2246546;
 DR EMBL; U71366; G3551763;
 DR PFAM; PF00048; i18; 1.
 KW HYPOTHETICAL PROTEIN.
 SQ SEQUENCE 95 AA; 10485 MW; 5283348D CRC32;
 Query Match 78.5%; Score 73; DB 14; Length 95;
 Best Local Similarity 66.7%; Pred. No. 2.76e-03;
 Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
 Db 74 QICADPCKNWVR 85
 QY 1 QVCADPSEEWVQ 12
 RESULT 4
 ID Q00175 PRELIMINARY; PRT; 119 AA.
 AC Q00175;
 DT 01-JUL-1997 (TREMBLREL. 04, CREATED)
 DT 01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
 DE MP1F-2.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
 OC CATARRHINI; HOMINIDAE; HOMO.
 [1]
 RP SEQUENCE FROM N.A.
 RA PATEL V.P., KREIDER B.L., LI Y., LI H., LEUNG K., SALCEDO T.,
 RA NARDELLI B., PIPPALLA V., GENTZ S., THOTAKURA R., PARMELEE D.,
 RA GENTZ R., GAROTTA G.;
 RL J. EXP. MED. 0:0-0(0).
 DR EMBL; U85768; G1916252;
 DR PFAM; PF00048; i18; 1.
 SQ SEQUENCE 119 AA; 13119 MW; CDF526F0 CRC32;
 Query Match 77.4%; Score 72; DB 4; Length 119;
 Best Local Similarity 66.7%; Pred. No. 4.48e-03;
 Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;
 Db 72 QFCGDPKQEWVQ 83
 QY 1 QVCADPSEEWVQ 12
 RESULT 5
 ID Q43927 PRELIMINARY; PRT; 109 AA.
 AC Q43927;

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US-09-150-813-42.rspt

01-JUN-1998 (TREMREL. 06, CREATED)
 01-JUN-1998 (TREMREL. 06, LAST SEQUENCE UPDATE)
 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
 CXC CHEMOKINE PRECURSOR.
 BKA-1.
 OS HOMO SAPIENS (HUMAN).
 EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
 CATARRHINI; HOMINIDAE; HOMO.
 [1]
 SEQUENCE FROM N.A.
 RP MEDLINE; 98130629.
 RA LEGER D.F., LOETSCHER M., STUBER ROOS R., CLARK-LEWIS I.,
 BAGGTOLINI M., MOSER B.;
 "A call-attracting chemokine 1, a human CXC chemokine expressed in
 lymphoid tissues, selectively attracts B lymphocytes via
 BLR1/CXCR5.";
 J. EXP. MED. 187:655-660(1998).
 [2]
 SEQUENCE FROM N.A.
 RP MEDLINE; 98146056.
 RA GUNN M.D., NGO V.N., ANSEL K.M., EKLAND E.H., CYSTER J.G.,
 WILLIAMS L.T.;
 "A B-cell-homing chemokine made in lymphoid follicles activates
 Burkitt's lymphoma receptor-1.";
 NATURE 391:799-803(1998).
 [3]
 SEQUENCE FROM N.A.
 RA NAPOLITANO M., SPINETTI G., GAETANO C., CAPOGROSSI C.M.;
 SUBMITTED (OCT-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; AJ002211; E1249325;
 DR EMBL; AF044197; G2911376;
 DR EMBL; AF029894; G3169814;
 SIGNAL.
 KW SIGNAL.
 FT CHAIN.
 FT CHAIN.
 FT CHAIN.
 SEQUENCE 109 AA; 12664 MW; BE5A46BC CRC32;
 Query Match 73.1%; Score 68; DB 4; Length 109;
 Best Local Similarity 63.6%; Pred. No. 3.03e-02;
 Matches 7; Conservative 1; Mismatches 3; Indels 0; Gaps 0;
 Db 75 VCVDPQAEWQ 85
 QY 2 VCAPDPSEWVQ 12
 RESULT 6
 ID 009006 PRELIMINARY; PRT; 133 AA.
 AC 009006;
 DT 01-JUL-1997 (TREMREL. 04, CREATED)
 DT 01-AUG-1998 (TREMREL. 07, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
 DE BETA CHEMOKINE EXODUS-2.
 GN SCY21.
 OS MUS MUSCULUS (MOUSE).
 EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
 SCIUROGNATHI; MURIDAE; MURINAE; MUS.
 [1]
 SEQUENCE FROM N.A.
 RC TISSUE-TOTAL FETUS;
 RX MEDLINE; 97444139.
 RA HROMAS R., KIM C.H., KLEMSZ M., KRATHWOHL M., FIFE K., COOPER S.,
 SCHNIZLEIN-BICK C., BROXMEYER H.E.;
 "Isolation and characterization of Exodus-2, a novel C-C chemokine
 with a unique 37-amino acid carboxyl-terminal extension.";
 J. IMMUNOL. 159:2554-2558(1997).
 [2]
 SEQUENCE FROM N.A.
 RP SEQUENCE-TOTAL FETUS;
 RC HROMAS R.A.;
 RA HROMAS R.A.;
 RL SUBMITTED (JUN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; U88322; G3169697;
 DR MGD; MGI:1057677; SCY21.

DR PFAM; PF00048; i18; 1.
 SQ SEQUENCE 133 AA; 14600 MW; B34A5E22 CRC32;
 Query Match 73.1%; Score 68; DB 11; Length 133;
 Best Local Similarity 58.3%; Pred. No. 3.03e-02;
 Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;
 Db 73 ELCANPERGVQ 84
 QY 1 QVCADPSEWVQ 12
 RESULT 7
 ID 009002 PRELIMINARY; PRT; 133 AA.
 AC 009002;
 DT 01-JUL-1997 (TREMREL. 04, CREATED)
 DT 01-JUL-1997 (TREMREL. 04, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
 DE SMALL INDUCIBLE CYTOKINE A21 (TCA4).
 GN SCY21.
 OS MUS MUSCULUS (MOUSE).
 EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
 SCIUROGNATHI; MURIDAE; MURINAE; MUS.
 [1]
 SEQUENCE FROM N.A.
 RP TISSUE-THYMUS;
 RC TANABE S., LU Z., LUO Y., QUACKENBUSH E.J., BERMAN M.A.,
 COLLINS-RACIE L.A., MI S., REILLY C., LO D., JACOBS K.A., DORF M.E.;
 SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 [2]
 SEQUENCE FROM N.A.
 RP MEDLINE; 97400322.
 RX HEDRICK J.A., ZLOTNIK A.;
 "Identification and characterization of a novel beta chemokine
 containing six conserved cysteines.";
 J. IMMUNOL. 159:1589-1593(1997).
 [3]
 SEQUENCE FROM N.A.
 RA HEDRICK J.A., ZLOTNIK A.;
 SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 DR EMBL; AF006637; G2209189;
 DR EMBL; AF001980; G2624927;
 DR MGD; MGI:1097677; SCY21.
 DR PFAM; PF00048; i18; 1.
 SQ SEQUENCE 133 AA; 14558 MW; C0532523 CRC32;
 Query Match 73.1%; Score 68; DB 11; Length 133;
 Best Local Similarity 58.3%; Pred. No. 3.03e-02;
 Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;
 Db 73 ELCANPERGVQ 84
 QY 1 QVCADPSEWVQ 12
 RESULT 8
 ID 098157 PRELIMINARY; PRT; 94 AA.
 AC 098157;
 DT 01-FEB-1997 (TREMREL. 02, CREATED)
 DT 01-FEB-1997 (TREMREL. 02, LAST SEQUENCE UPDATE)
 DT 01-NOV-1998 (TREMREL. 08, LAST ANNOTATION UPDATE)
 DE VMP-1B.
 OS KAPOSI'S SARCOMA-ASSOCIATED HERPES-LIKE VIRUS,
 AND KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS
 OC VIRUSES; DSDNA VIRUSES, NO RNA STAGE; HERPESVIRIDAE;
 OC GAMMAHERPESVIRINAE; RHADINOVIRUS.
 [1]
 SEQUENCE FROM N.A.
 RP SEQUENCE FROM N.A.
 RA NICHOLAS J., RUVOLO V.R., BURNS W.H., SANDFORD G., WAN X., CIUFO D.,
 HENDRICKSON S., GUO H.G., HAYWARD G.S., REITZ M.S.;
 SUBMITTED (SEP-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 [2]
 SEQUENCE FROM N.A.
 RP SEQUENCE FROM N.A.

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RX MEDLINE; 97094384.
RA MOORE P.S., BASHOFF C., WEISS R.A., CHANG Y.;
RT "Molecular mimicry of human cytokine and cytokine response pathway
RL genes by KSHV.";
RL SCIENCE 274:1739-1744(1996).
[3]
RP SEQUENCE FROM N.A.
RX MEDLINE; 97121480.
RA RUSSO J.J., BOHENZKY R.A., CHIEN M.C., CHEN J., YAN M., MADDALENA D.,
RA PARRY J.P., PERUZZI D., EDELMAN I.S., CHANG Y., MOORE P.S.;
RT "Nucleotide sequence of the Kaposi sarcoma-associated herpesvirus
RL (HHV8).";
RL PROC. NATL. ACAD. SCI. U.S.A. 93:14862-14867(1996).
[4]
RP SEQUENCE FROM N.A.
RA RUSSO J.J., BOHENZKY R.A., CHIEN M.C., CHEN J., YAN M., MADDALENA D.,
RA PARRY J.P., PERUZZI D., EDELMAN I.S., CHANG Y., MOORE P.S.;
RL SUBMITTED (OCT-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
[5]
RP SEQUENCE FROM N.A.
RA RUSSO J.J., BOHENZKY R.A., CHIEN M.C., CHEN J., YAN M., MADDALENA D.,
RA PARRY J.P., PERUZZI D., EDELMAN I.S., CHANG Y., MOORE P.S.;
RL SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
[6]
RP SEQUENCE FROM N.A.
RA NEIPEL F., ALBRECHT J.C., FLECKENSTEIN B.;
RT "Cell-homologous genes in the Kaposi's sarcoma-associated
RL rhadinovirus human herpesvirus 8: determinants of its
RT pathogenicity?";
RL J. VIROL. 71:4187-4192(1997).
[7]
RP SEQUENCE FROM N.A.
RA SUN R., LIN S.-F., MILLER G.;
RL SUBMITTED (SEP-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; 067775; G1562496; -
DR EMBL; 075698; G1718264; -
DR EMBL; 093872; G2246517; -
DR EMBL; 071365; G3551760; -
DR PFAM; PF00048; i18; 1.
KW HYPOTHETICAL PROTEIN.
SQ SEQUENCE 94 AA; 10486 MW; 91312200 CRC32;

Query Match 72.0%; Score 67; DB 14; Length 94;
Best Local Similarity 72.7%; Pred. No. 4.85e-02;
Matches 8; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Db 72 QVCDKSKDWW 82
QY 1 QVCDPSEEW 11
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RESULT 9
ID O00585 PRELIMINARY; PRT; 134 AA.
AC O00585;
DT 01-JUL-1997 (TREMBLREL. 04, CREATED)
DT 01-JUL-1997 (TREMBLREL. 04, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE BETA CHEMOKINE EXODUS-2.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
OC CATARRHINI; HOMINIDAE; HOMO.
[1]
RP SEQUENCE FROM N.A.
RA KROMAS R.A., GRAY P., KLEMSZ M., FIFE K., BROXMEYER H.;
RL SUBMITTED (JUN-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
[2]
RP SEQUENCE FROM N.A.
RX MEDLINE; 97400322.
RA HEDRICK J.A., ZLOTNIK A.;
RT "Identification and characterization of a novel beta chemokine
RL containing six conserved cysteines.";
RL J. IMMUNOL. 159:1589-1593(1997).

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RN SEQUENCE FROM N.A.
RP HEDRICK J.A., ZLOTNIK A.;
RL SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
[4]
RP SEQUENCE FROM N.A.
RA NAGIRA M., IMAI T., HIESHIMA K., KUSUDA J., RIDANPA M., TAKAGI S.,
RA NISHIMURA M., KAKIZAKI M., NOMIYAMA H., YOSHIE O.;
RL SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL; 088320; G2196920; -
DR EMBL; AF001979; G2624925; -
DR DR EMBL; AB002409; D1022673; -
DR PFAM; PF00048; i18; 1.
SQ SEQUENCE 134 AA; 14646 MW; FE86A239 CRC32;

Query Match 72.0%; Score 67; DB 4; Length 134;
Best Local Similarity 66.7%; Pred. No. 4.85e-02;
Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 73 ELCADPKELWVQ 84
QY 1 QVCDPSEEWVQ 12
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RESULT 10
ID O35188 PRELIMINARY; PRT; 395 AA.
AC O35188;
DT 01-JAN-1998 (TREMBLREL. 05, CREATED)
DT 01-JAN-1998 (TREMBLREL. 05, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE NEUROTACTIN.
GN SCYD1.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
[1]
RP SEQUENCE FROM N.A.
RX PAN Y., CLARE L., HONG Z., DOLICH S., DEEDS J., GONZALO J., VATH J.,
RA GOSSELIN M., MA J., DUSSAULT B., WOOLF B., ALPERIN A., CULPEPPER J.,
RA GUTIERREZ-RAMOS J.C., GEARING D.;
RT "Neurotactin, a membrane-anchored chemokine upregulated in brain
RL inflammation.";
RL NATURE 387:611-617(1997).
DR EMBL; AF010586; G2317698; -
DR MGD; MGI:1097153; SCYD1.
DR PFAM; PF00048; i18; 1.
SQ SEQUENCE 395 AA; 42098 MW; E3CD0612 CRC32;

Query Match 72.0%; Score 67; DB 11; Length 395;
Best Local Similarity 80.0%; Pred. No. 4.85e-02;
Matches 8; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Db 74 CADPKKRWVQ 83
QY 3 CADPSEEWVQ 12
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RESULT 11
ID O35933 PRELIMINARY; PRT; 395 AA.
AC O35933;
DT 01-JAN-1998 (TREMBLREL. 05, CREATED)
DT 01-JAN-1998 (TREMBLREL. 05, LAST SEQUENCE UPDATE)
DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
DE FRACTALKINE.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
OC SCIUROGNATHI; MURIDAE; MURINAE; MUS.
[1]
RP SEQUENCE FROM N.A.
RC STRAIN-BALB/C; TISSUE-BRAIN;
RA ROSSI D., HARDIMAN G., COPELAND N., GILBERT D.J., JENKINS N.,
RA ZLOTNIK A., BAZAN J.F.;

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Sat Feb 5 15:14:01 2000

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RL SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
DR EMBL: U92565; G2459677; -.
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
SQ SEQUENCE 395 AA; 42040 MW; 3997A113 CRC32;
  Query Match 72.0%; Score 67; DB 11; Length 395;
  Best Local Similarity 80.0%; Pred. No. 4.85e-02; Indels 0; Gaps 0;
  Matches 8; Conservative 0; Mismatches 2;
Db 74 CADPKEKWVQ 83
QY 3 CADPSEEWVQ 12
  RESULT 12 PRELIMINARY; PRT; 97 AA.
  ID O89093
  AC O89093;
  DT 01-NOV-1998 (TREMBLREL. 08, CREATED)
  DT 01-NOV-1998 (TREMBLREL. 08, LAST SEQUENCE UPDATE)
  DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
  DE CC CHEMOKINE ST38 PRECURSOR.
  DE LARC.
  GN MUS MUSCULUS (MOUSE).
  OS MUS MUSCULUS (MOUSE).
  OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; RODENTIA;
  OC SCUROGNATHI; MORIDAE; MURINAE; MUS.
  RN [1]
  RP SEQUENCE FROM N.A.
  RA UTANS-SCHNEITZ U., LOREZ H., KLINKERT W.E.F., DA SILVA J.,
  RA LESSLAUER W.;
  RT "A novel rat CC chemokine, identified by targeted differential
  RT display, is upregulated in brain inflammation.";
  RL J. NEUROIMMUNOL. 0:0-0(1998).
  RN [2]
  RP SEQUENCE FROM N.A.
  RA VILLARES R.;
  RL SUBMITTED (JUL-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
  DR EMBL: AF053313; G3551819; -.
  DR EMBL: AJ007862; E1312757; -.
  KW SIGNAL.
  FT CHAIN 1 27 POTENTIAL.
  FT CHAIN 28 97 CC CHEMOKINE ST38.
  SQ SEQUENCE 97 AA; 10826 MW; 053405BD CRC32;
  Query Match 71.0%; Score 66; DB 11; Length 97;
  Best Local Similarity 70.0%; Pred. No. 7.73e-02; Indels 0; Gaps 0;
  Matches 7; Conservative 2; Mismatches 1;
Db 74 VCADPKQNV 83
QY 2 VCADPSEEWV 11
  RESULT 13 PRELIMINARY; PRT; 91 AA.
  ID O43646
  AC O43646;
  DT 01-JUN-1998 (TREMBLREL. 06, CREATED)
  DT 01-JUN-1998 (TREMBLREL. 06, LAST SEQUENCE UPDATE)
  DT 01-JUN-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
  DE RANTES PRECURSOR.
  DE SCYAS.
  GN HOMO SAPIENS (HUMAN).
  OS HOMO SAPIENS (HUMAN).
  OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
  OC CATARRHINI; HOMINIDAE; HOMO.
  RN [1]
  RP SEQUENCE FROM N.A.
  RA JANG J.S., KIM B.E.;
  RL SUBMITTED (JAN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
  RN [2]
  RP SEQUENCE FROM N.A.
  RA NOMIYAMA H.;
  RT "Structure of a region of 181 kb containing five CC chemokine
  RT genes";
  RL SUBMITTED (AUG-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
  DR EMBL: AF043341; G2905632; -.
  DR EMBL: AF088219; G3719366; -.
  DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
  KW SIGNAL.
  FT CHAIN 1 23 POTENTIAL.
  FT CHAIN 24 91 RANTES.
  SQ SEQUENCE 91 AA; 9990 MW; CF404FAD CRC32;
  Query Match 69.9%; Score 65; DB 4; Length 91;
  Best Local Similarity 58.3%; Pred. No. 1.23e-01; Indels 0; Gaps 0;
  Matches 7; Conservative 2; Mismatches 3;
Db 71 QVCANPEKKWVR 82
QY 1 QVCADPSEEWVQ 12
  RESULT 14 PRELIMINARY; PRT; 397 AA.
  ID P78423
  AC P78423; O00672;
  DT 01-MAY-1997 (TREMBLREL. 03, CREATED)
  DT 01-MAY-1997 (TREMBLREL. 03, LAST SEQUENCE UPDATE)
  DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
  DE CX3C CHEMOKINE PRECURSOR.
  DE A-152E5.2.
  GN HOMO SAPIENS (HUMAN).
  OS HOMO SAPIENS (HUMAN).
  OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; PRIMATES;
  OC CATARRHINI; HOMINIDAE; HOMO.
  RN [1]
  RP SEQUENCE FROM N.A.
  RX MEDLINE; 97177111.
  RA BAZAN J.F., BACON K.B., HARDIMAN G., WANG W., SOO K., ROSSI D.,
  RA GREAVES D.R., ZLOTNIK A., SCHALL T.J.;
  RT "A new class of membrane-bound chemokine with a CX3C motif.";
  RL NATURE 385:640-644(1997).
  RN [2]
  RP SEQUENCE FROM N.A.
  RA ADAMS M.D., LOFTUS B.J., ZHOU L., CROSBY M., FUHRMANN J., MASON T.M.,
  RA BRANDON R., KIM U.J., KERLAVAGE A.R., VENTER J.C.;
  RT "Homo sapiens Chromosome 16 BAC clone CIT987SK-A-152E5.";
  RL SUBMITTED (JUN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
  DR EMBL: U91835; G1899259; -.
  DR EMBL: U84487; G1888523; -.
  DR EMBL: AC004382; G3252821; -.
  DR PFAM; PF00048; i18; 1.
  KW SIGNAL.
  FT CHAIN 1 24 POTENTIAL.
  FT CHAIN 25 397 CX3C CHEMOKINE.
  SQ SEQUENCE 397 AA; 42202 MW; C8093D7D CRC32;
  Query Match 68.8%; Score 64; DB 4; Length 397;
  Best Local Similarity 77.8%; Pred. No. 1.94e-01; Indels 0; Gaps 0;
  Matches 7; Conservative 1; Mismatches 1;
Db 74 CADPKEKWV 82
QY 3 CADPSEEWV 11
  RESULT 15 PRELIMINARY; PRT; 203 AA.
  ID Q67634
  AC Q67634;
  DT 01-NOV-1996 (TREMBLREL. 01, CREATED)
  DT 01-NOV-1996 (TREMBLREL. 01, LAST SEQUENCE UPDATE)
  DT 01-NOV-1998 (TREMBLREL. 08, LAST ANNOTATION UPDATE)
  DE ECO Q. PROTEIN (FRAGMENT).
  DE ECO Q. PROTEIN (FRAGMENT).
  OS GALLID HERPESVIRUS TYPE 1.
  OC VIRUSES; DSDNA VIRUSES. NO RNA STAGE; HERPESVIRIDAE;
  OC ALPHAHERPESVIRINAE; VARICELLOVIRUS.
  RN [1]
  RP SEQUENCE FROM N.A.
  RA STRAIN-GA;
  RX MEDLINE; 96074534.

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RA PENG Q., ZENG M., BHUIYAN Z.A., UBUKATA E., TANAKA A., NONOYAMA M.,
 RA SHIRAZI Y.,
 RT "Isolation and characterization of Marek's disease virus (MDV) cDNAs
 RT mapping to the BamHI-I2, BamHI-Q2, and BamHI-L fragments of the MDV
 RT genome from lymphoblastoid cells transformed and persistently
 RT infected with MDV.",
 RL VIROLOGY 213:590-599(1995).
 DR EMBL; U34966; G1185444; -.
 DR PFAM; PF00048; i18; 1.
 FT NON_TER
 SQ SEQUENCE 203 AA; 23132 MW; 887D04C3 CRC32;

Query Match 67.7%; Score 63; DB 14; Length 203;
 Best Local Similarity 63.6%; Pred.No. 3.06e-01;
 Matches 7; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

Db 145 VCVDPFAPWVQ 155

QY 2 VCAPSEEWVQ 12

Search completed: Fri Feb 4 17:23:23 2000
 Job time : 57 secs.


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CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC -----
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CC -----
CC EMBL: D00044; D1000469; -
CC DR EMBL: M23452; G188559; -
CC DR EMBL: M25315; G602453; -
CC DR EMBL: X03754; G758089; -
CC DR EMBL: X04018; G34297; ALT_SEQ.
CC DR EMBL: M23178; G182847; -
CC DR EMBL: D90144; G219906; -
CC DR PIR: A24198; A24198.
CC DR PIR: A30574; A30574.
CC DR MIM: 182283; -
CC DR PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
CC DR PFAM: PF000048; i18; 1.
CC DR HSP: P13236; IHUN.
CC KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
CC FT SIGNAL 1 22 POTENTIAL.
CC FT CHAIN 23 92 MACROPHAGE INFLAMMATORY PROTEIN 1-ALPHA.
CC FT DISULFID 33 57 BY SIMILARITY.
CC FT DISULFID 34 73 BY SIMILARITY.
CC SQ SEQUENCE 92 AA; 10085 MW; C24DD919 CRC32;
Query Match 100.0%; Score 93; DB 1; Length 92;
Best Local Similarity 100.0%; Pred. No. 2,07e-08;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Db 71 QVCADPSEEWVQ 82
QY 1 QVCADPSEEWVQ 12
IIIIIIIIII
RESULT 2
ID M10_HUMAN STANDARD; PRT; 93 AA.
AC P16619;
DT 01-AUG-1990 (REL. 15, CREATED)
DT 01-AUG-1990 (REL. 15, LAST SEQUENCE UPDATE)
DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
DE TONSILLAR LYMPHOCYTE LD78 BETA PROTEIN PRECURSOR (GOS19-2 PROTEIN)
DE (PAT 464.2)
DE SCYA3LI OR 464.2.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-BLOOD.
RX MEDLINE; 90287702.
RA IRVING S.G., ZIPFEL P.F., BALKE J., MCBRIDE O.W., MORTON C.C.,
RA BURD P.R., SIEBENLIST U., KELLY K.;
RT "Two inflammatory mediator cytokine genes are closely linked and
RT variably amplified on chromosome 17q.";
RL NUCLEIC ACIDS RES. 18:3261-3270(1990).
RN [2]
RP SEQUENCE FROM N.A.
RC MEDLINE; 91103879.
RX BLUM S., FORSDYKE R.E., FORSDYKE D.R.;
RT "Three human homologs of a murine gene encoding an inhibitor of stem
RT cell proliferation.";
RL DNA CELL BIOL. 9:589-602(1990).
RN [3]
RP SEQUENCE FROM N.A.
RC MEDLINE; 90287155.
RX NAKAO M., NOMIYAMA H., SHIMADA K.;
RT "Structures of human genes coding for cytokine LD78 and their

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RA BROWN K.D., ZURAWSKI S.M., MOSMANN T.R., ZURAWSKI G.;
 RT "A family of small inducible proteins secreted by leukocytes are
 RT members of a new superfamily that includes leukocyte and
 RT fibroblast-derived inflammatory agents, growth factors, and
 RT indicators of various activation processes.";
 RL J. IMMUNOL. 142:679-687(1989).
 RN [4]
 RN SEQUENCE FROM N.A.
 RN MEDLINE: 91061800.
 RX BAIXERAS E., ROMAN-ROMAN S., JITSUKAWA S., GENEVEE C., MECHICHE S.,
 RA VIEGAS-POUGNOT E., HERCEND T., TRIEBEL F.;
 RA "Cloning and expression of a lymphocyte activation gene (LAG-1).";
 RT MOL. IMMUNOL. 27:1091-1102(1990).
 RN [5]
 RN SEQUENCE FROM N.A.
 RN TISSUE-T-CELL;
 RX MEDLINE: 89325421.
 RA CHANG H.C., REINHERZ E.L.;
 RA "Isolation and characterization of a cDNA encoding a putative
 RT cytokine which is induced by stimulation via the CD2 structure on
 RT human T lymphocytes.";
 RL EUR. J. IMMUNOL. 19:1045-1051(1989).
 RN [6]
 RN SEQUENCE FROM N.A.
 RN MEDLINE: 91373378.
 RX NAPOLITANO M., MODI W.S., CEVARIO S.J., GNARRA J.R., SEUANEZ H.N.,
 RA LEONARD W.J.;
 RA "The gene encoding the Act-2 cytokine. Genomic structure, HTLV-I/Tax
 RT responsiveness of 5' upstream sequences, and chromosomal
 RT localization.";
 RL J. BIOL. CHEM. 266:17531-17536(1991).
 RN [7]
 RN SEQUENCE OF 6-92 FROM N.A.
 RX MEDLINE: 90038522.
 RA MILLER M.D., HATA S., WAAL MALEFYT R., KRANGEL M.S.;
 RA "A novel polypeptide secreted by activated human T lymphocytes.";
 RL J. IMMUNOL. 143:2907-2916(1989).
 RN [8]
 RN STRUCTURE BY NMR.
 RX MEDLINE: 94182137.
 RA LODI P.J., GARRETT D.S., KUSCEWSKI J., TSANG M.L.S., WEATHERBEE J.A.,
 RA LEONARD W.J., GRONENBORN A.M., CLORE G.M.;
 RA "High-resolution solution structure of the beta chemokine hMIP-1 beta
 RT by multidimensional NMR.";
 RL SCIENCE 263:1762-1767(1994).
 CC -!- FUNCTION: MONOKINE WITH INFLAMMATORY AND CHEMOKINETIC PROPERTIES.
 CC -!- SUBUNIT: HOMODIMER.
 CC -!- INDUCTION: BY MITOGENS.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
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 CC -----
 CC EMBL: M23502; G533213;
 CC EMBL: M23516; G602455;
 CC EMBL: J04130; G178018;
 CC EMBL: X53683; G34218;
 CC EMBL: X33682; E35870; ALT_SEQ.
 CC EMBL: X16166; G32036;
 CC EMBL: M69203; G1332376;
 CC EMBL: M69201; G1332376; JOINED.
 CC EMBL: M69202; G1332376; JOINED.
 CC EMBL: M57503; G339727;
 CC PIR: A31767; A31767.
 CC PIR: B30574; B30574.
 CC PIR: D30552; D30552.
 CC PIR: JH0319; JH0319.
 DR PIR: A37411; A37411.
 DR PDB: IHUM; 30-APR-94.
 DR PDB: IHUN; 30-APR-94.
 DR MIM; 182284; -.
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; 118; 1.
 KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL; 3D-STRUCTURE.
 FT SIGNAL 1 23 MACROPHAGE INFLAMMATORY PROTEIN 1-BETA.
 FT CHAIN 24 92 BY SIMILARITY.
 FT DISULFID 34 58 BY SIMILARITY.
 FT DISULFID 35 74 T -> C (IN REF. 7).
 FT CONFLICT 6 6 A -> S (IN REF. 6).
 FT CONFLICT 15 15 P -> L (IN REF. 2).
 FT CONFLICT 20 20 ARKLPK -> REASS (IN REF. 3).
 FT CONFLICT 40 45 S -> I (IN REF. 7).
 FT CONFLICT 56 56 S -> G (IN REF. 6).
 FT CONFLICT 70 70 S -> T (IN REF. 7).
 FT CONFLICT 80 80
 FT STRAND 29 29
 FT STRAND 33 33
 FT HELIX 45 47
 FT STRAND 50 53
 FT STRAND 63 66
 FT STRAND 72 75
 FT TURN 77 78
 FT HELIX 80 90
 FT HELIX 90
 SQ SEQUENCE 92 AA; 10212 MW; F18E7AFD CRC32;
 Query Match 92.5%; Score 86; DB 1; Length 92;
 Best Local Similarity 91.7%; Pred. No. 9.35e-07;
 Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Db 72 QVCADPSESFWQ 83
 QY 1 QVCADPSESFWQ 12
 RESULT 4
 ID M1LB_RABIT STANDARD; PRT: 92 AA.
 AC P46632; 1995 (REL. 32, CREATED)
 DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
 DT 01-NOV-1995 (REL. 34, LAST ANNOTATION UPDATE)
 DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
 DE MACROPHAGE INFLAMMATORY PROTEIN 1-BETA PRECURSOR (MIP-1-BETA) (IMMUNE
 DE ACTIVATION PROTEIN 2) (ACT-2).
 DE SC1A4
 GN ORICOLAGUS CUNICULUS (RABBIT).
 OS ORICOLAGUS CUNICULUS (RABBIT).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC LAGOMORPHA; LEPORIDAE; ORYCTOLAGUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=NEW ZEALAND WHITE;
 RX MEDLINE: 94198229.
 RA MOKI S., GOTO K., GOTO F., MUTAKAMI K., OHKAWARA S., YOSHINAGA M.;
 RA "Dynamic changes in mRNA expression of neutrophils during the course
 RT of acute inflammation in rabbits.";
 RL INT. IMMUNOL. 6:149-156(1994).
 CC -!- FUNCTION: MONOKINE WITH INFLAMMATORY AND CHEMOKINETIC PROPERTIES
 CC (BY SIMILARITY).
 CC -!- SUBUNIT: HOMODIMER (BY SIMILARITY).
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
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 CC -----
 CC EMBL: D17402; G599578;
 CC PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.

DR PFAM; PF00048; i18; 1.
 KW HSP; P13236; IHUN.
 FT CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 FT SIGNAL 1 23 BY SIMILARITY.
 FT CHAIN 24 92 MACROPHAGE INFLAMMATORY PROTEIN 1-BETA.
 FT DISULFID 34 58 BY SIMILARITY.
 FT DISULFID 35 74 BY SIMILARITY.
 SQ SEQUENCE 92 AA; 10066 MW; A629AB2D CRC32;

Query Match 89.2%; Score 83; DB 1; Length 92;
 Best Local Similarity 83.3%; Pred. No. 4.63e-06;
 Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 72 QVCANPSESWVQ 83
 |||||
 QY 1 QVCADPSEEWVQ 12

RESULT 5
 ID M1A_RAT STANDARD; PRT; 92 AA.
 AC P50229;
 DT 01-OCT-1996 (REL. 34, CREATED)
 DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
 DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
 DE MACROPHAGE INFLAMMATORY PROTEIN 1-ALPHA PRECURSOR (MIP-1-ALPHA).
 GN SCY3 OR MIP1A.
 OS RATTUS NORVEGICUS (RAT).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=LONG EVANS; TISSUE=LUNG;
 RX MEDLINE; 95238980;
 RA SHANLEY T.P., SCHWAL H., FRIEDL H.P., JONES M.L., WARD P.A.;
 RT "Role of macrophage inflammatory protein-1 alpha (MIP-1 alpha) in
 acute lung injury in rats."
 RL J. IMMUNOL. 154:4793-4802(1995).
 RN [3]
 RP SEQUENCE OF 24-57.
 RC STRAIN=WISTAR;
 RX MEDLINE; 96183056;
 RA NAKAGAWA H., SHIOTA S., TAKANO K., SHIBATA F., KATO H.;
 RT "Cytokine-induced neutrophil chemoattractant (CINC)-2 alpha, a novel
 member of rat GRO/CINC, is a predominant chemokine produced by
 lipopolysaccharide-stimulated rat macrophages in culture."
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 220:945-948(1996).
 CC -!- FUNCTION: MONOKINE WITH INFLAMMATORY AND CHEMOKINETIC PROPERTIES.
 CC BASOPHILS, AND LYMPHOCYTES. NEUTROPHILS, EOSINOPHILS,
 CC PRODUCTION, NEUTROPHIL RECRUITMENT AND SUBSEQUENT LUNG INJURY AND
 CC MAY FUNCTION AS AN AUTOCRINE MEDIATOR FOR THE MACROPHAGE
 CC PRODUCTION OF TNF-ALPHA WHICH IN TURN UP-REGULATES VASCULAR
 CC ADHESION MOLECULES REQUIRED FOR NEUTROPHIL INFILTRATION. THIS PROTEIN
 CC BINDS HEPARIN.
 CC -!- INDUCTION: BY LIPOPOLYSACCHARIDE (LPS).
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
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CC EMBL; U22414; G790633;
 DR EMBL; U06435; G459150;
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSP; P13236; IHUN.
 KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL; HEPARIN-BINDING.
 FT SIGNAL 1 23
 FT CHAIN 24 92 MACROPHAGE INFLAMMATORY PROTEIN 1-ALPHA.
 FT DISULFID 34 57 BY SIMILARITY.
 FT DISULFID 35 73 BY SIMILARITY.
 FT CONFLICT 6 6 A -> T (IN REF. 2).
 FT CONFLICT 57 57 C -> W (IN REF. 2 AND 3).
 SQ SEQUENCE 92 AA; 10335 MW; F48CF89F CRC32;

Query Match 83.9%; Score 78; DB 1; Length 92;
 Best Local Similarity 75.0%; Pred. No. 6.33e-05;
 Matches 9; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Db 71 QICADPKETWVQ 82
 |||||
 QY 1 QVCADPSEEWVQ 12

RESULT 6
 ID MCPI_CAVPO STANDARD; PRT; 120 AA.
 AC Q08782;
 DT 01-NOV-1995 (REL. 32, CREATED)
 DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1) (MONOCYTE
 DE CHEMOATTRACTANT PROTEIN-1).
 GN SCY2 OR MCPI.
 OS CAVIA PORCELLUS (GUINEA PIG).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC RODENTIA; HYSTRICOGNATHI; CAVIIDAE; CAVIA.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=2; TISSUE=SPLEEN;
 RX MEDLINE; 93267104.
 RA YOSHIMURA T.;
 RT "cDNA cloning of guinea pig monocyte chemoattractant protein-1 and
 expression of the recombinant protein."
 RL J. IMMUNOL. 150:5025-5032(1993).
 CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
 CC NEUTROPHILS.
 CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
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CC EMBL; L04985; G349821;
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSP; P80098; INCV.
 KW CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE; GLYCOPROTEIN.
 FT SIGNAL 1 23
 FT CHAIN 24 120 BY SIMILARITY.
 FT MOD_RES 24 24 MONOCYTE CHEMOTACTIC PROTEIN 1-
 FT PYRROLIDONE CARBOXYLIC ACID (BY
 FT SIMILARITY).
 FT DISULFID 33 57 BY SIMILARITY.
 FT DISULFID 34 73 BY SIMILARITY.
 FT CARBOHYD 97 97 POTENTIAL.
 SQ SEQUENCE 120 AA; 13741 MW; 22FAD257 CRC32;

Query Match 82.8%; Score 77; DB 1; Length 120;

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Best Local Similarity 66.7%; Pred. No. 1.06e-04; Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Ds 71 EVCAADPTOKVQ 82
QY 1 QVCADPSEEWQ 12

RESULT 7 STANDARD; PRT; 148 AA.
ID MCP1_RAT
AC P14844;
DT 01-APR-1990 (REL. 14, CREATED)
DT 01-APR-1990 (REL. 14, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1) (IMMEDIATE-EARLY
DE SERUM-RESPONSIVE JE PROTEIN).
DE SCY2 OR JE OR MCP1.
GN RATTUS NORVEGICUS (RAT).
OS EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
[1]
RN SEQUENCE FROM N.A.
RP STRAIN-WAG/RIJ; TISSUE-KIDNEY;
RX MEDLINE; 90174947.
RA TIMMERS H.T.H.M., PRONK G.J., BOS J.L., VAN DER EB A.J.;
RT "Analysis of the rat JE gene promoter identifies an AP-1 binding site
RT essential for basal expression but not for IPA induction.";
RL NUCLEIC ACIDS RES. 18:23-34(1990).
[2]
RN SEQUENCE FROM N.A.
RP SEQUENCE FROM N.A.
RX MEDLINE; 91128376.
RA YOSHIMURA T., TAKEYA M., TAKAHASHI K.;
RT "Molecular cloning of rat monocyte chemoattractant protein-1 (MCP-1)
RT and its expression in rat spleen cells and tumor cell lines.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 174:504-509(1991).
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
CC NEUTROPHILS.
CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).

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EMBL; X17053; G55531; -;
DR EMBL; M57441; G205334; -;
DR PIR; JN0128; JN0128.
DR PIR; S07723; S07723.
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; 118; 1.
DR HSP; P13500; IDOL.
DR CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE; GLYCOPROTEIN.
KW SIGNAL 1 23
FT CHAIN 24 148
FT MOD_RES 24 24
FT DISULFID 34 59
FT DISULFID 35 75
FT CARBOHYD 126 126
SQ SEQUENCE 148 AA; 16460 MW; DB97F97C CRC32;
Query Match 82.8%; Score 77; DB 1; Length 148;
Best Local Similarity 66.7%; Pred. No. 1.06e-04;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Ds 73 EICADPNKEWQ 84
QY 1 QVCADPSEEWQ 12

RESULT 8 STANDARD; PRT; 148 AA.
ID MCP1_MOUSE
AC P10148;
DT 01-MAR-1989 (REL. 10, CREATED)
DT 01-MAR-1989 (REL. 10, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1) (PLATELET-DERIVED
DE GROWTH FACTOR-INDUCIBLE PROTEIN JE).
DE SCY2 OR MCP1 OR JE.
GN MUS MUSCULUS (MOUSE).
OS EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; MUS.
[1]
RN SEQUENCE FROM N.A.
RP MEDLINE; 89093129.
RX KAWAHARA R.S., DEUEL T.F.;
RA "Platelet-derived growth factor-inducible gene JE is a member of a
RT family of small inducible genes related to platelet factor 4.";
RL J. BIOL. CHEM. 264:679-682(1989).
[2]
RN SEQUENCE FROM N.A.
RP SEQUENCE FROM N.A.
RX MEDLINE; 88234501.
RA ROLLINS B.J., MORRISON E.D., STILES C.D.;
RT "Cloning and expression of JE, a gene inducible by platelet-derived
RT growth factor and whose product has cytokine-like properties.";
RL PROC. NATL. ACAD. SCI. U.S.A. 85:3738-3742(1988).
[3]
RN SEQUENCE OF 26-42.
RP MEDLINE; 91293127.
RX VAN DAMME J., DECOCK B., BERTINI R., CONINGS R., LENAERTS J.-P.,
RA PUT W., OPDENAKKER G., MANTOVANI A.;
RT "Production and identification of natural monocyte chemotactic
RT protein from virally infected murine fibroblasts. Relationship with
RT the product of the mouse competence (JE) gene.";
RL EUR. J. BIOCHEM. 199:223-229(1991).
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
CC NEUTROPHILS.
CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
CC -!- INDUCTION: BY PLATELET-DERIVED GROWTH FACTOR.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).

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EMBL; J04467; G387169; -;
DR EMBL; M19681; G387168; -;
DR PIR; A30209; A30209.
DR PIR; A30861; A30861.
DR PIR; S16226; S16226.
DR MGD; MGI:98259; SCY2.
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; 118; 1.
DR HSP; P13500; IDOL.
DR CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE; GLYCOPROTEIN.
KW SIGNAL 1 23
FT CHAIN 24 148
FT MOD_RES 24 24
FT DISULFID 34 59
FT DISULFID 35 75
FT CARBOHYD 126 126
SQ SEQUENCE 148 AA; 16326 MW; B7572BEC CRC32;
Query Match 82.8%; Score 77; DB 1; Length 148;
Best Local Similarity 75.0%; Pred. No. 1.06e-04;

Matches 9; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Db 73 EVCADPKKEWQ 84
QY 1 QVCADPSEEWQ 12

RESULT 9
ID M1B_RAT STANDARD; PRT; 92 AA.
AC P50230;
DT 01-OCT-1996 (REL. 34, CREATED)
DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
DE MACROPHAGE INFLAMMATORY PROTEIN 1-BETA (MIP-1-BETA)
GN SCVA4 OR M1B
OS RATTUS NORVEGICUS (RAT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=LONG EVANS; TISSUE=LUNG;
RA JONES M.L., SHANLEY J.P., SCHMAL H., FRIEDL H.P., WARD P.A.;
RL SUBMITTED (FEB-1994) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -!- FUNCTION: MONOKINE WITH INFLAMMATORY AND CHEMOKINETIC PROPERTIES.
CC -!- SUBUNIT: HOMODIMER (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (MIP-1-BETA).
CC C-C) (CHEMOKINE CC)
CC
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CC or send an email to license@isb-sib.ch).
CC [1]
CC
CC EMBL: U06434; G459148; -
CC PROSITE: P500472; SMALL_CYTOKINES_CC; 1.
CC PFAM: PF00048; I18; 1.
CC HSP: P13236; 1HUN.
CC CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
CC SIGNAL 1 23 BY SIMILARITY.
CC CHAIN 24 92 MACROPHAGE INFLAMMATORY PROTEIN 1-BETA.
CC DISULFID 34 58 BY SIMILARITY.
CC DISULFID 35 74 BY SIMILARITY.
CC SEQUENCE 92 AA; 10234 MW; 3C82B006 CRC32;
Query Match 81.7%; Score 76; DB 1; Length 92;
Best Local Similarity 81.8%; Pred. No. 1.77e-04;
Matches 9; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 72 QICADPSPWV 82
QY 1 QVCADPSEEW 11

RESULT 10
ID M1B_CHICK STANDARD; PRT; 90 AA.
AC Q0826;
DT 01-NOV-1997 (REL. 35, CREATED)
DT 15-JUL-1998 (REL. 36, LAST SEQUENCE UPDATE)
DE MACROPHAGE INFLAMMATORY PROTEIN 1-BETA HOMOLOG PRECURSOR.
GN GALLUS GALLUS (CHICKEN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; ARCHOSAURIA; AVES;
OC NEOGNATHAE; GALLIFORMES; PHASIANIDAE; PHASIANINAE; GALLUS.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=BONE MARROW;
RX MEDLINE; 95369710.
RA PETRENKO O., ISCHENKO I., ENRIETTO P.J.;
RT "Isolation of a cDNA encoding a novel chicken chemokine homologous to
RT mammalian macrophage inflammatory protein-1 beta.";

GENE 160:305-306(1995).
[2]
RN SEQUENCE OF 14-90 FROM N.A.
RA PETRENKO O., ENRIETTO P.J.;
RL SUBMITTED (JUL-1994) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -!- FUNCTION: MONOKINE WITH INFLAMMATORY AND CHEMOKINETIC PROPERTIES
CC (BY SIMILARITY).
CC -!- SUBUNIT: HOMODIMER (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC
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CC [1]
CC
CC EMBL: L34553; G509596; -
CC PROSITE: P500472; SMALL_CYTOKINES_CC; 1.
CC PFAM: PF00048; I18; 1.
CC HSP: P13236; 1HUN.
CC CYTOKINE; CHEMOTAXIS; SIGNAL.
CC SIGNAL 1 21 BY SIMILARITY.
CC CHAIN 22 90 MACROPHAGE INFLAMMATORY PROTEIN 1-BETA.
CC DISULFID 32 56 BY SIMILARITY.
CC DISULFID 33 72 BY SIMILARITY.
CC CONFLICT 87 87 L -> M (IN REF. 2).
CC SEQUENCE 90 AA; 9969 MW; B5637084 CRC32;
Query Match 80.6%; Score 75; DB 1; Length 90;
Best Local Similarity 58.3%; Pred. No. 2.94e-04;
Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 70 EVCANPENDWQ 81
QY 1 QVCADPSEEWQ 12

RESULT 11
ID MCP4_HUMAN STANDARD; PRT; 98 AA.
AC Q99616;
DT 15-JUL-1998 (REL. 36, CREATED)
DT 15-JUL-1998 (REL. 36, LAST SEQUENCE UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 4 PRECURSOR (MCP-4) (MONOCYTE
DE CHEMOTACTIC PROTEIN 4) (CK-BETA10) (NCC-1).
GN SCYA13 OR MCP4 OR NCC1.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=HEART;
RX MEDLINE; 9711354.
RA GARCIA-ZEPEDA E.A., COMBADIÈRE C., ROTHENBERG M.E., SARAFI M.N.,
RA LAVIGNE F., HAMID Q., MURPHY P.M., LUSTER A.D.;
RT "Human monocyte chemotactant protein (MCP)-4 is a novel CC
RT chemokine with activities on monocytes, eosinophils, and basophils
RT induced in allergic and nonallergic inflammation that signals through
RT the CC chemokine receptors (CCR)-2 and -3.";
RN J. IMMUNOL. 157:5613-5626(1996).
RN [2]
RP SEQUENCE FROM N.A., AND SEQUENCE OF 17-98.
RC TISSUE=FETAL;
RX MEDLINE; 96235049.
RA UGUCCIONI M., LOETSCHER P., FORSSMANN U., DEWALD B., LI H., LIMA S.H.,
RA LI Y., KREIDER B., SAROTA G., THELEN M., BAGGIOLINI M.;
RT "Monocyte chemotactic protein 4 (MCP-4), a novel structural and
RT functional analogue of MCP-3 and eotaxin.";
RL J. EXP. MED. 183:2379-2384(1996).
RN [3]

Sat, Feb 5 15:14:00 2000

US-09-150-813-42.rsp

SEQUENCE FROM N.A., AND SEQUENCE OF 22-33.

RP TISSUE-FETAL;
RC MEDLINE; 97341179.
RA BERKHOUT T.A., SARAU H.M., MOORES K., WHITE J.R., ELSHOUBAGY N.,
RA APPELBAUM E., REAPE T.J., BRAUNER M., MAKWANA J., FOLEY J.J.,
RA SCHMIDT D.B., INBURGIA C., MACNULTY P.H.E., MACPHEE C.,
RA O'SHANNESY D., SCOTT M., GROOT P.H.E., MACPHEE C.,
RT "Cloning, in vitro expression, and functional characterization of a
RT novel human CC chemokine of the monocyte chemotactic protein (MCP)
RT family (MCP-4) that binds and signals through the CC chemokine
RT receptor 2B.";
RL J. BIOL. CHEM. 272:16404-16413(1997).
RN [4]
RN SEQUENCE FROM N.A.
RP DANIE M., GIBSON A.;
RL SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [5]
RN SEQUENCE FROM N.A.
RC TISSUE-LUNG;
RA POWER C.A., MEYER A., RISON S.C.G., GUYE-COULIN F., WELLS T.N.C.;
RL SUBMITTED (DEC-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, LYMPHOCYTES,
CC EOSINOPHILS AND EOSINOPHILS, BUT NOT NEUTROPHILS. SIGNALS THROUGH
CC CCR2B AND CCR3 RECEPTORS. PLAYS A ROLE IN THE ACCUMULATION OF
CC LEUKOCYTES AT BOTH SIDES OF ALLERGIC AND NONALLERGIC INFLAMMATION.
CC MAY BE INVOLVED IN THE RECRUITMENT OF MONOCYTES INTO THE ARTERIAL
CC WALL DURING THE DISEASE PROCESS OF ATHEROSCLEROSIS. MAY PLAY A
CC ROLE IN THE MONOCYTE ATTRACTION IN TISSUES CHRONICALLY EXPOSED TO
CC EXOGENOUS PATHOGENS.
CC -!- MASS SPECTROMETRY: MW-9314; MW_ERR=30; METHOD-MALDI; RANGE=17-98.
CC -!- MASS SPECTROMETRY: MW-8760; MW_ERR=30; METHOD-MALDI; RANGE=24-98.
CC -!- MASS SPECTROMETRY: MW-8575; MW_ERR=30; METHOD-MALDI; RANGE=24-98.
CC -!- INDUCTION: BY INTERLEUKIN-1 AND TNF-ALPHA.
CC -!- TISSUE SPECIFICITY: WIDELY EXPRESSED. FOUND IN SMALL INTESTINE,
CC THYMUS, COLON, LUNG, TRACHEA, STOMACH AND LYMPH NODE. LOW LEVELS
CC SEEN IN THE PULMONARY ARTERY SMOOTH MUSCLE CELLS.
CC -!- THIS PROTEIN CAN BIND HEPARIN.
CC -!- PTM: ONE MAJOR ISOFORM MCP-4, AND TWO MINOR ISOFORMS (LA)MCP-4 AND
CC (FNPOGLA)MCP-4 ARE PRODUCED BY DIFFERENTIAL SIGNAL CLEAVAGE.
CC (LA)MCP-4 IS ABOUT 30 FOLD LESS ACTIVE THAN MCP-4.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC
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CC
CC -----
CC EMBL; U46767; G1732123;
CC DR EMBL; AC002482; G2340091; --
CC DR EMBL; X98306; E248571; --
CC DR MIM; 601391; --
CC DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
CC DR PFAM; PF00048; 118; 1.
CC DR HSPF; P13500; 1DOL;
CC KW CYTOKINE; CHEMOTAXIS; SIGNAL; GLYCOPROTEIN; INFLAMMATORY RESPONSE.
FT SIGNAL 1 23
FT CHAIN 24 98
FT MOD_RES 24 24 MONOCYTE CHEMOTACTIC PROTEIN 4.
FT DISULFID 34 58 PYRROLIDONE CARBOXYLIC ACID.
FT DISULFID 35 74 BY SIMILARITY.
FT CARBOHYD 29 29 POTENTIAL.
SQ SEQUENCE 98 AA; 10986 MW; DF52F6EC CRC32;
Query Match 80.6%; Score 75; DB 1; Length 98;
Best Local Similarity 66.7%; Pred. No. 2.94e-04;
Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;
Db 72 EICADPSEWQ 83
:::|||||::|

QY 1 QVCADPSEWQ 12

RESULT 12

ID MCP3_HUMAN STANDARD; PRT; 99 AA.
AC P80098;
DT 01-DEC-1992 (REL. 24, CREATED)
DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 3 PRECURSOR (MCP-3) (MONOCYTE
DE CHEMOATTRACTANT PROTEIN 3) (NC28).
DE SCYA7 OR MCP3.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RN SEQUENCE FROM N.A., AND SEQUENCE OF 31-67 AND 71-99.
RX MEDLINE; 93213290.
RA OPDENAKKER G., FROYEN G., FITEN P., PROOST P., VAN DAMME J.;
RT "Human monocyte chemotactic protein-3 (MCP-3): molecular cloning of
RT the cDNA and comparison with other chemokines.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 191:535-542(1993).
RN [2]
RN SEQUENCE FROM N.A.
RX MEDLINE; 94375065.
RA OPDENAKKER G., FITEN P., NYS G., FROYEN G., VAN ROY N., SPELEMAN F.,
RA LAUREYS G., VAN DAMME J.;
RT "The human MCP-3 gene (SCYA7): cloning, sequence analysis, and
RT assignment to the C-C chemokine gene cluster on chromosome
RT 17q11.2-q12.";
RL GENOMICS 21:403-408(1994).
RN [3]
RN SEQUENCE FROM N.A.
RX MEDLINE; 93305913.
RA MINTY A., CHALON P., GUILLEMOT J.C., KAGHAD M., LIAUZUN P.,
RA MACAZIN M., MILOUX B., MINTY C., RAMOND P., VITA N., LOPKER J.,
RA SHRE D., FERRARA P., CAPUT D.;
RT "Molecular cloning of the MCP-3 chemokine gene and regulation of its
RT expression.";
RL EUR. CYTOKINE NETW. 4:99-110(1993).
RN [4]
RN SEQUENCE OF 30-99.
RC TISSUE-OSTEOSARCOMA;
RX MEDLINE; 92308855.
RA VAN DAMME J., PROOST P., LENAERTS J.-P., OPDENAKKER G.;
RT "Structural and functional identification of two human, tumor-derived
RT monocyte chemotactic proteins (MCP-2 and MCP-3) belonging to the
RT chemokine family.";
RL J. EXP. MED. 176:59-65(1992).
RN [5]
RN STRUCTURE BY NMR, AND SUBUNIT.
RX MEDLINE; 97053697.
RA KIM K.-S., RAJARAMAN K., CLARK-LEWIS I., SYKES B.D.;
RT "Structural characterization of a monomeric chemokine: monocyte
RT chemoattractant protein-3.";
RL FEBS LETT. 395:277-282(1996).
RN [6]
RN STRUCTURE BY NMR.
RX MEDLINE; 97263733.
RA MEUNIER S., BERNASSAU J.-M., GUILLEMOT J.-C., FERRARA P., DARBON H.;
RT "Determination of the three-dimensional structure of CC chemokine
RT monocyte chemoattractant protein 3 by 1H two-dimensional NMR
RT spectroscopy.";
RL BIOCHEMISTRY 36:4412-4422(1997).
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES AND
CC EOSINOPHILS, BUT NOT NEUTROPHILS. AUGMENTS MONOCYTE ANTI-TUMOR
CC ACTIVITY. ALSO INDUCES THE RELEASE OF GELATINASE B. THIS PROTEIN
CC CAN BIND HEPARIN.
CC -!- SUBUNIT: MONOMER.
CC -!- PTM: O-GLYCOSYLATED.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC -----

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DR EMBL; X72308; G313708; ALT_INIT.
 DR EMBL; X72309; -; NOT_ANNOTATED_CDS.
 DR EMBL; X71087; G288399; -
 DR EMBL; X71087; G288398; ALT_INIT.
 DR EMBL; X71087; G288397; ALT_INIT.
 DR PIR; JC1478; JC1478.
 DR PIR; S32222; S32222.
 DR PIR; A54678; A54678.
 DR PDB; INCV; 15-OCT-97.
 DR MIM; 158106; -
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 KW CYTOKINE; CHEMOTAXIS; HEPARIN-BINDING; GLYCOPROTEIN; SIGNAL;
 FT INFLAMMATORY RESPONSE; 3D-STRUCTURE.
 FT SIGNAL 1 23
 FT CHAIN 24 99 MONOCYTE CHEMOTACTIC PROTEIN 3.
 FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID.
 FT DISULFID 34 59 BY SIMILARITY.
 FT DISULFID 35 75 BY SIMILARITY.
 FT CARBOHYD 29 29 POTENTIAL.
 FT CONFLICT 30 30 T -> K (IN REF. 4).
 FT CONFLICT 68 70 MISSING (IN REF. 4).
 SQ SEQUENCE 99 AA; 1200 MW; 7502E19C CRC32;

Query Match 80.6%; Score 75; DB 1; Length 99;
 Best Local Similarity 58.3%; Pred. No. 2,94e-04;
 Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 73 EICADPTQKVVQ 84
 QY ::::: |||
 1 QVCADPSEWVQ 12

RESULT 13
 ID MIP4 HUMAN STANDARD; PRT; 89 AA.
 AC P55774;
 DT 01-NOV-1997 (REL. 35, CREATED)
 DT 01-NOV-1997 (REL. 35, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DE MACROPHAGE INFLAMMATORY PROTEIN 4 PRECURSOR (MIP-4) (PULMONARY AND
 DE ACTIVATION-REGULATED CHEMOKINE) (CC CHEMOKINE PARC) (ALTERNATIVE
 DE SCVA18 OR MIP4
 GN HOMO SAPIENS (HUMAN).
 OS EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
 [1]
 RP SEQUENCE FROM N.A.
 RA LI H., RUBEN S.;
 RA "Macrophage inflammatory protein-3 and -4.";
 RL PATENT NUMBER US5504003, 02-APR-1996.
 RN [2]
 RP SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
 RC TISSUE-AORTA, AND LUNG;
 RX MEDLINE; 97376836.
 RA HIESHIMA K., INAI T., BABA M., SHODAI K., ISHIZUKA K.,
 RA NAKAGAWA T., TSURUTA J., TAKEYA M., SAKAI Y., TAKATSUKI K.,
 RA MIURA R., ODENAKER G., VAN DAMME J., YOSHIE O., NOMIYAMA H.;
 RT "A novel human CC chemokine PARC that is most homologous to
 RT macrophage-inflammatory protein-1 alpha/LD78 alpha and chemotactic
 RT for T lymphocytes, but not for monocytes.";
 RL J. IMMUNOL. 159:1140-1149(1997).
 RN [3]
 RP SEQUENCE FROM N.A.
 RA KODELJA V., MUELLER C., POLITZ O., HAKIY N., ORFANOS C.E., GOERDT S.;

RL SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [4]
 RP DISCUSSION OF SEQUENCE.
 RX MEDLINE; 97275308.
 RA WELLS T.N.C., PEITISCH M.C.;
 RT "The chemokine information source: identification and
 RT characterization of novel chemokines using the WorldWideWeb and
 RL J. LEUKOC. BIOL. 61:545-550(1997).
 CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS LYMPHOCYTES BUT NOT
 CC MONOCYTES OR GRANULOCYTES. MAY BE INVOLVED IN B CELL MIGRATION
 CC INTO B CELL FOLLICLES IN LYMPH NODES.
 CC -!- TISSUE SPECIFICITY: EXPRESSED AT HIGH LEVELS IN THE LUNG. A LOWER
 CC LEVEL EXPRESSION IS SEEN IN LYMPHOID TISSUES SUCH AS LYMPH NODES,
 CC THYMUS AND APPENDIX.
 CC -!- INDUCTION: BY LIPOPOLYSACCHARIDE (LPS).
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC
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DR EMBL; AB000221; D1022520; -
 DR EMBL; Y13710; E321838; -
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSP; P13236; LHUN.
 KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 FT SIGNAL 1 20
 FT CHAIN 21 89 MACROPHAGE INFLAMMATORY PROTEIN 4.
 FT DISULFID 30 54 BY SIMILARITY.
 FT DISULFID 31 70 BY SIMILARITY.
 SQ SEQUENCE 89 AA; 9849 MW; 052AA3DC CRC32;

Query Match 79.5%; Score 74; DB 1; Length 89;
 Best Local Similarity 66.7%; Pred. No. 4.88e-04;
 Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 68 QICADPNKKVVQ 79
 QY ::::: |||
 1 QVCADPSEWVQ 12

RESULT 14
 ID MIP_MOUSE STANDARD; PRT; 92 AA.
 AC P14097;
 DT 01-JAN-1990 (REL. 13, CREATED)
 DT 01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DE MACROPHAGE INFLAMMATORY PROTEIN 1-BETA PRECURSOR (MIP-1-BETA) (H400
 DE PROTEIN) (SIS-GAMMA) (ACT2).
 GN SCVA4 OR MIP1B.
 OS MUS MUSCULUS (MOUSE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; MUS.
 [1]
 RP SEQUENCE FROM N.A.
 RA MEDLINE; 89067830.
 RA SHERRY B., TEKAMP-OLSON P., GALLEGOS C., BAUER D., DAVATELIS G.,
 RA WOLFE S.D., MASIARZ F., COIT D., CERAMI A.;
 RT "Resolution of the two components of macrophage inflammatory protein
 RT 1, and cloning and characterization of one of those components,
 RT macrophage inflammatory protein 1 beta.";
 RL J. EXP. MED. 168:2251-2259(1988).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 89093958.
 RA BROWN K.D., ZURAWSKI S.M., MOSMANN T.R., ZURAWSKI G.;

Sat Feb 5 15:14:00 2000

US-09-150-813-42.rsp

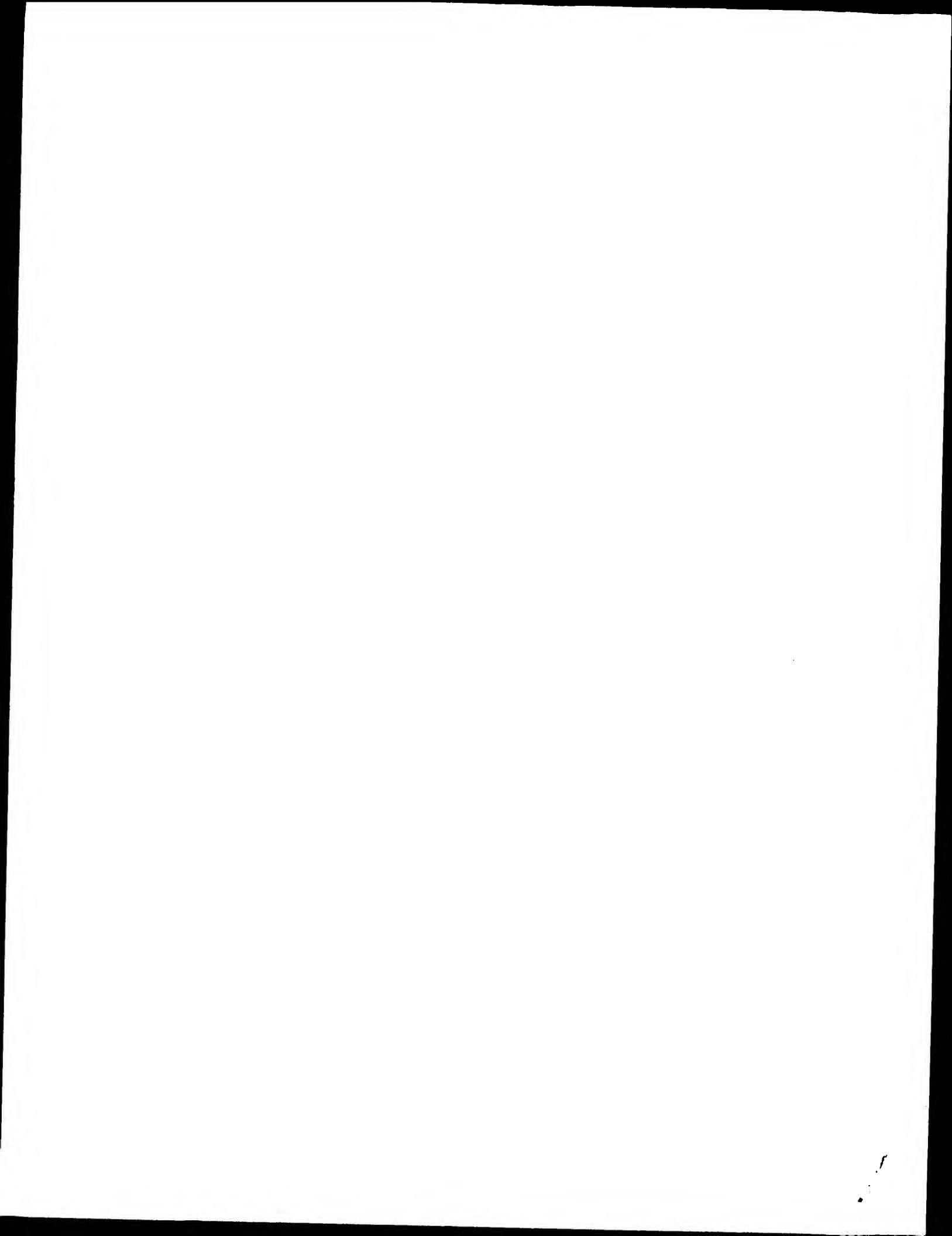
"A family of small inducible proteins secreted by leukocytes are members of a new superfamily that includes leukocyte and fibroblast-derived inflammatory agents, growth factors, and indicators of various activation processes."

J. IMMUNOL. 142:679-687(1989).

[3]
 RN SEQUENCE FROM N.A.
 RP TISSUE=LIVER;
 RC STRAIN=DBA/2J; TISSUE=LIVER;
 RA DAUBERSIES P., LEPRETRE F., BAILLEUL B., GROVE M., PRAGNELL I.,
 RA PLUMB M.A.;
 RL SUBMITTED (OCT-1991) TO EMBL/GENBANK/DBJ DATA BANKS.
 CC -!- FUNCTION: MONOKINE WITH INFLAMMATORY AND CHEMOKINETIC PROPERTIES.
 CC -!- SUBUNIT: HOMODIMER (BY SIMILARITY).
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE C-C) (CHEMOKINE CC).
 CC
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 CC
 CC EMBL; M23503; G533245; -;
 DR EMBL; M35590; G199697; -;
 DR EMBL; X62502; G53127; -;
 DR PIR; C30552; C30552.
 DR PIR; J10088; J10088.
 DR MGD; MGI:98261; SCY44.
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; 118; 1.
 DR HSP; P12336; IHUN.
 DR CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 KW SIGNAL 1 23
 FT CHAIN 24 92 MACROPHAGE INFLAMMATORY PROTEIN 1-BETA.
 FT DISULFID 34 58 BY SIMILARITY.
 FT DISULFID 35 74 BY SIMILARITY.
 FT CONFLICT 75 79 A -> P (IN REF. 1).
 FT CONFLICT 79 79 E -> Q (IN REF. 1).
 FT CONFLICT 88 88 D -> H (IN REF. 1).
 SQ SEQUENCE 92 AA; 10168 MW; C543B91F CRC32;
 Query Match 78.5%; Score 73; DB 1; Length 92;
 Best Local Similarity 72.7%; Pred. No. 8.08e-04;
 Matches 8; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
 Db 72 QICANPSPW 82
 QY 1 QVCADPSEWV 11
 RESULT 15
 ID CCL1_HUMAN STANDARD; PRT; 93 AA.
 AC Q16627;
 DT 01-NOV-1997 (REL. 35, CREATED)
 DT 01-NOV-1997 (REL. 35, LAST SEQUENCE UPDATE)
 DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
 DE CHEMOKINE CC-1 PRECURSOR (HCC-1) (NCC-2).
 GN SCY44 OR NCC2.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A., AND SEQUENCE OF 20-93.
 RC TISSUE=BONE MARROW;
 RX MEDLINE; 96136773.
 RA SCHULZ-KNAPPE P., MAEGERT H.-J., DEWALD B., MEYER M., CETIN Y.,
 RA KUBIES M., TOMECKOWSKI J., KIRCHHOFF K., RAIDA M., ADEMAN K.,
 RA KIST A., REINECKE M., SILLARD R., PARDIGOL A., UGUCCIONI M.,
 RA BAGGIOLINI M., FORSSMANN W.-G.;
 RT "HCC-1, a novel chemokine from human plasma."
 J. EXP. MED. 183:295-299(1996).

[2]
 RN SEQUENCE FROM N.A.
 RP TISSUE=LIVER;
 RC PARDIGOL A., MAEGERT H.-J., ZUCHT H.D., FORSSMANN W.-G.,
 RA SCHULZ-KNAPPE P.;
 RL SUBMITTED (MAY-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [3]
 RP SEQUENCE FROM N.A.
 RC TISSUE=PLACENTA;
 RA PARDIGOL A., MAEGERT H.-J., CIESLAK A., HILL O., SCHULZ-KNAPPE P.,
 RA FORSSMANN W.-G.;
 RL SUBMITTED (OCT-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
 CC -!- FUNCTION: HAS WEAK ACTIVITIES ON HUMAN MONOCYTES AND ACTS VIA RECEPTORS THAT ALSO RECOGNIZE MIP-1 ALPHA. IT INDUCED INTRACELLULAR CA2+ CHANGES AND ENZYME RELEASE, BUT NO CHEMOTAXIS, AT CONCENTRATIONS OF 100-1,000 NM, AND WAS INACTIVE ON T LYMPHOCYTES, NEUTROPHILS, AND EOSINOPHIL LEUKOCYTES. ENHANCES THE PROLIFERATION OF CD34 MYELOID PROGENITOR CELLS.
 CC -!- TISSUE SPECIFICITY: EXPRESSED CONSTITUTIVELY IN SEVERAL NORMAL TISSUES: SPLEEN, LIVER, SKELETAL AND HEART MUSCLE, GUT, AND BONE MARROW. PRESENT AT HIGH CONCENTRATIONS (1-80 NM) IN PLASMA.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE C-C) (CHEMOKINE CC).
 CC
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 CC
 CC EMBL; Z49270; G1004269; -;
 DR EMBL; Z70292; E233856; -;
 DR EMBL; Z49269; G1004267; -;
 DR MIM; 601392; -;
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; 118; 1.
 DR HSP; P12336; IHUN.
 KW CYTOKINE; SIGNAL.
 FT CHAIN 1 19 CHEMOKINE CC-1.
 FT DISULFID 20 93 BY SIMILARITY.
 FT DISULFID 35 59 BY SIMILARITY.
 FT DISULFID 36 75 BY SIMILARITY.
 SQ SEQUENCE 93 AA; 10678 MW; A3E7BCAD CRC32;
 Query Match 78.5%; Score 73; DB 1; Length 93;
 Best Local Similarity 63.6%; Pred. No. 8.08e-04;
 Matches 7; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
 Db 74 VCTNPSDKWVQ 84
 QY 2 VCADPSEWVQ 12

Search completed: Fri Feb 4 17:22:08 2000
 Job time : 6 secs.



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 (TM)

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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm
 Run on: Fri Feb 4 17:21:13 2000; MasPar time 3.56 Seconds
 Tabular output not generated. 134.882 Million cell updates/sec

Title: >US-09-150-813-42
 Description: (1-12) from US09150813.ppe
 Perfect Score: 93
 Sequence: 1 QVCADPSEWVQ 12
 Scoring table: PAM 150
 Gap 15
 Searched: 122810 seqs, 40068593 residues
 Post-processing: Minimum Match 0%
 Listing first 45 summaries
 Database: pir60
 1:pir1 2:pir2 3:pir3 4:pir4
 Statistics: Mean 24.749; Variance 37.567; scale 0.659

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Match %	Query Length	DB ID	Description	Pred. No.
1	93	100.0	92	2 A30574	macrophage inflammato	2.99e-07
2	93	100.0	93	2 B35673	LD78-beta protein pre	2.99e-07
3	86	92.5	50	2 C60407	monocyte adherence-in	9.32e-06
4	86	92.5	92	1 A31767	macrophage inflammato	9.32e-06
5	83	89.2	92	2 I46730	immune activation gen	3.95e-05
6	79	84.9	120	2 JE0177	lymphocyte and monocy	2.64e-04
7	78	83.9	92	2 I52322	macrophage inflammato	4.22e-04
8	77	82.8	120	2 I48147	monocyte chemoattract	6.72e-04
9	77	82.8	148	2 A30209	PDGF-inducible JE gly	6.72e-04
10	77	82.8	148	2 S07723	immediate-early serum	6.72e-04
11	75	80.6	109	2 A54678	monocyte chemotactic	1.70e-03
12	73	78.5	92	2 C30552	macrophage inflammato	4.24e-03
13	73	78.5	99	2 JC2417	monocyte chemoattract	4.24e-03
14	72	77.4	99	2 A60299	monocyte chemoattract	6.67e-03
15	71	76.3	91	1 A46539	macrophage inflammato	1.05e-02
16	71	76.3	92	2 A32393	macrophage chemoattract	1.05e-02
17	71	76.3	99	2 JC2136	monocyte chemoattract	1.64e-02
18	70	75.3	95	2 JN0841	interleukin-8 - dog	1.64e-02
19	70	75.3	101	2 S42496	interleukin 8 - sheep	1.64e-02
20	70	75.3	101	2 I46997	interleukin-8 - sheep	1.64e-02
21	70	75.3	103	2 A44253	alveolar macrophage c	1.64e-02
22	70	75.3	103	2 A53096	interleukin-8 precurs	1.64e-02
23	69	74.2	99	2 JC5295	monocyte chemotactic	2.56e-02

24	74.2	125	2 I46857	monocyte chemoattract	2.56e-02	
25	68	73.1	99	2 JC2336	monocyte chemoattract	3.98e-02
26	68	73.1	99	2 A39296	monocyte chemoattract	3.98e-02
27	67	72.0	116	2 I49555	gene C10 protein - mo	6.17e-02
28	66	71.0	99	2 A37034	interleukin-8 precurs	9.55e-02
29	66	71.0	103	2 A26736	transformation-induce	9.55e-02
30	66	71.0	103	2 I50417	RSV-induced protein -	9.55e-02
31	65	69.9	91	1 A28815	monocyte chemoattract	1.47e-01
32	65	69.9	96	2 JC2478	monocyte chemoattract	1.47e-01
33	65	69.9	96	2 I48099	eotaxin precursor - r	1.47e-01
34	64	68.8	97	2 JC4912	eotaxin precursor - h	1.47e-01
35	64	68.8	101	2 I46871	eotaxin precursor - h	2.26e-01
36	63	67.7	89	2 I53416	interleukin-8 - rabbi	2.26e-01
37	63	67.7	89	2 A53497	pre-B-cell growth-sti	3.46e-01
38	63	67.7	93	2 I81182	cytokine - mouse	3.46e-01
39	63	67.7	93	2 G01540	cytokine SDF-1-beta -	3.46e-01
40	61	65.6	101	2 I48148	Neutrophil attractant	8.03e-01
41	60	64.5	114	1 ETHUL	lymphotactin precursor	1.83e+00
42	59	63.4	114	1 ETMSL	lymphotactin precursor	1.83e+00
43	59	63.4	385	2 S54997	reverse transcriptase	1.83e+00
44	59	63.4	385	2 S54995	reverse transcriptase	1.83e+00
45	59	63.4	385	2 S54987	reverse transcriptase	1.83e+00

ALIGNMENTS

RESULT	1
ENTRY	A30574
TITLE	macrophage inflammatory protein 1-alpha precursor - human
ALTERNATE_NAMES	LD78-alpha protein precursor; lymphocyte tumor promoter-induced protein; lymphocyte inflammatory protein homolog GOS19-1; MIP-1alpha; PAR464; small inducible cytokine A3; T-cell activation protein 1
ORGANISM	#formal_name Homo sapiens #common_name man
DATE	03-Aug-1992 #sequence_revision 03-Aug-1992 #text_change 29-May-1998
ACCESSIONS	A35673; A30574; A30412; A24198; A30908
REFERENCE	A35673
#authors	Nakao, M.; Nomiya, H.; Shimada, K.
#journal	Mol. Cell. Biol. (1990) 10:3646-3658
#title	Structures of human genes coding for cytokine LD78 and their expression.
#cross-references	MUID:90287155
#accession	A35673
#molecule_type	DNA
#residues	1-92 #label NAK
#cross-references	GB:D90144; NID:g219905; PID:dl014875; PID:g219906
REFERENCE	A30574
#authors	Zipfel, P.F.; Balke, J.; Irving, S.G.; Kelly, K.; Siebenlist, U.
#journal	J. Immunol. (1989) 142:1582-1590
#title	Mitogenic activation of human T cells induces two closely related genes which share structural similarities with a new family of secreted factors.
#cross-references	MUID:89140347
#accession	A30574
#molecule_type	mRNA
#residues	1-92 #label ZIP
#cross-references	GB:M25315; NID:g602452; PID:g602453
REFERENCE	A30412
#authors	Blum, S.; Forsdyke, R.E.; Forsdyke, D.R.
#journal	DNA Cell Biol. (1990) 9:589-602
#title	Three human homologs of a murine gene encoding an inhibitor of stem cell proliferation.
#cross-references	MUID:91103879
#accession	A30412
#molecule_type	mRNA
#residues	1-92 #label BLU
REFERENCE	A24198
#authors	Obaru, K.; Fukuda, M.; Maeda, S.; Shimada, K.
#journal	J. Biochem. (1986) 99:885-894
#title	A cDNA clone used to study mRNA inducible in human tonsillar lymphocytes by a tumor promoter.

```

#cross-references MUID:86223879
#accession A24198
##status preliminary
##molecule_type mRNA
##residues 1-92 ##label OBA

GENETICS
#gene GDB:SCYA3
##cross-references GDB:120368; OMIM:182283
#map_position 17q11-17q21
CLASSIFICATION #superfamily macrophage inflammatory protein
FEATURE
1-20
21-92
#domain signal sequence #status predicted #label SIG\
#product macrophage inflammatory protein 1-alpha #status
predicted #label MAT\
#disulfide_bonds #status predicted
SUMMARY
33-57,34-73 #length 92 #molecular-weight 10085 #checksum 4316

Query Match 100.0%; Score 93; DB 2; Length 92;
Best Local Similarity 100.0%; Pred. No. 2.99e-07;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 71 QVCADPSEEWQ 82
QY 1 QVCADPSEEWQ 12
|||||

RESULT 2
ENTRY B35673 #type complete
TITLE LD78-beta protein precursor - human
ALTERNATE_NAMES macrophage inflammatory protein homolog GOS19-2; small
inducible cytokine A4
ORGANISM #formal_name Homo sapiens #common_name man
DATE 28-Sep-1990 #sequence_revision 28-Sep-1990 #text_change
24-Sep-1998
ACCESSIONS B35673; B30412; S10157; B30908
REFERENCE A35673
#authors Nakao, M.; Nomiya, H.; Shimada, K.
#journal Mol. Cell. Biol. (1990) 10:3646-3658
#title Structures of human genes coding for cytokine LD78 and their
expression.
#cross-references MUID:90287155
#accession B35673
##status preliminary
##molecule_type DNA
##residues 1-93 ##label NAK
#cross-references GB:D90145; NID:g219907; PID:g1014876; PID:g219908
REFERENCE A30412
#authors Blum, S.; Forsdyke, R.E.; Forsdyke, D.R.
#journal DNA Cell Biol. (1990) 9:589-602
#title Three human homologs of a murine gene encoding an inhibitor
of stem cell proliferation.
#cross-references MUID:91103879
#accession B30412
##status preliminary; not compared with conceptual translation
##molecule_type DNA
##residues 1-93 ##label BUU
#cross-references GB:M24110; GB:M32338; NID:g182848; PID:g182849
REFERENCE S10157
#authors Irving, S.G.; Zipfel, P.F.; Balke, J.; McBride, O.W.; Morton,
C.C.; Burd, P.R.; Siebenlist, U.; Kelly, K.
#journal Nucleic Acids Res. (1990) 18:3261-3270
#title Two inflammatory mediator cytokine genes are closely linked
and variably amplified on chromosome 17q.
#cross-references MUID:90287702
#accession S10157
##status preliminary
##molecule_type mRNA
##residues 1-93 ##label IRV
#cross-references EMBL:X52149; NID:g34750; PID:g296666
COMMENT This protein is a member of a "small inducible" or "activation
specific" gene family, is likely to be an early-acting
interleukin, and is the product of a putative G0/G1 switch gene.

GENETICS
#gene GDB:SCYA4
##cross-references GDB:120369; OMIM:182284
#map_position 17q11-17q21
#introns 26/1; 64/2
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS cytokine
FEATURE
1-22
23-93
#domain signal sequence #status predicted #label SIG\
#product LD78-beta protein #status predicted #label MAT\
#length 93 #molecular-weight 10161 #checksum 7784

SUMMARY
Query Match 100.0%; Score 93; DB 2; Length 93;
Best Local Similarity 100.0%; Pred. No. 2.99e-07;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 72 QVCADPSEEWQ 83
QY 1 QVCADPSEEWQ 12
|||||

RESULT 3
ENTRY C60407 #type fragment
TITLE monocyte adherence-induced protein 5 beta - human (fragment)
ORGANISM #formal_name Homo sapiens #common_name man
DATE 06-Nov-1992 #sequence_revision 06-Nov-1992 #text_change
03-May-1996
ACCESSIONS C60407
REFERENCE A60407
#authors Sporn, S.A.; Eierman, D.F.; Johnson, C.E.; Morris, J.;
Martin, G.; Ladner, M.; Haskill, S.
#journal J. Immunol. (1990) 144:4434-4441
#title Monocyte adherence results in selective induction of novel
genes sharing homology with mediators of inflammation and
tissue repair.
#cross-references MUID:90257367
#accession C60407
##status preliminary; not compared with conceptual translation
##molecule_type mRNA
##residues 1-50 ##label SPO
CLASSIFICATION #superfamily macrophage inflammatory protein
SUMMARY #length 50 #checksum 9927

Query Match 92.5%; Score 86; DB 2; Length 50;
Best Local Similarity 91.7%; Pred. No. 9.32e-06;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 30 QVCADPSEEWQ 41
QY 1 QVCADPSEEWQ 12
|||||

RESULT 4
ENTRY A31767 #type complete
TITLE macrophage inflammatory protein 1-beta precursor - human
ALTERNATE_NAMES cytokine HC21; G-26 protein; H400 homolog; lymphocyte
activation gene 1 protein (LAG-1); MIP-1beta; pAT744; SCYA2
protein (misidentification); SIS gamma homolog; T-cell
activation protein 2 (Act-2); T-cell activation protein
gamma
ORGANISM #formal_name Homo sapiens #common_name man
DATE 07-Jun-1990 #sequence_revision 29-May-1998 #text_change
29-May-1998
ACCESSIONS JH0319; A40978; A31767; B30574; B45817; D30552
REFERENCE JH0319
#authors Baixeras, E.; Roman-Roman, S.; Jitsukawa, S.; Genevée, C.;
Mechiche, S.; Viegas-Pequignot, E.; Hercend, T.; Triebel,
F.
#journal Mol. Immunol. (1990) 27:1091-1102
#title Cloning and expression of a lymphocyte activation gene
(lag-1).
#cross-references MUID:91061800
#accession JH0319
##status translation not shown

```



```
##molecule_type DNA
##residues 1-92 ##label BAI
##cross-references GB:X53682; NID:g34217; PID:g34218
##experimental_source natural killer cell, strain CD3-CD2+, F5, 5IIIES
REFERENCE
A40978
#authors Napolitano, M.; Modi, W.S.; Cevario, S.J.; Gnarr, J.R.;
Seuanez, H.N.; Leonard, W.J.
#journal J. Biol. Chem. (1991) 266:17531-17536
#title The gene encoding the Act-2 cytokine. Genomic structure, and
HTLV-I/tax responsiveness of 5' upstream sequences, and
chromosomal localization.
#cross-references MUID:91373378
#accession A40978
##molecule_type DNA
##residues 1-14,'S',16-69,'G',71-92 ##label NAP
##cross-references GB:M69201; NID:g178021
##note 15-Ala was also found
REFERENCE
A31767
#authors Lipes, M.A.; Napolitano, M.; Jeang, K.T.; Chang, N.T.;
Leonard, W.J.
#journal Proc. Natl. Acad. Sci. U.S.A. (1988) 85:9704-9708
#title Identification, cloning, and characterization of an immune
activation gene.
#cross-references MUID:89071764
#accession A31767
##molecule_type mRNA
##residues 1-92 ##label LIP
##cross-references GB:J04130; NID:g178017; PID:g178018
REFERENCE
A37411
#authors Chang, H.C.; Reinherz, E.L.
#journal Eur. J. Immunol. (1989) 19:1045-1051
#title Isolation and characterization of a cDNA encoding a putative
cytokine which is induced by stimulation via the CD2
structure on human T lymphocytes.
#cross-references MUID:89325421
#accession A37411
##molecule_type mRNA
##residues 1-92 ##label CHA
##cross-references GB:X16166; NID:g32035; PID:g32036
REFERENCE
A3057A
#authors Zipfel, P.F.; Balke, J.; Irving, S.G.; Kelly, K.; Siebenlist,
U.
#journal J. Immunol. (1989) 142:1582-1590
#title Mitogenic activation of human T cells induces two closely
related genes which share structural similarities with a
new family of secreted factors.
#cross-references MUID:89140347
#accession B3057A
##molecule_type mRNA
##residues 1-19,'L',21-92 ##label ZIP
##cross-references GB:M25316; NID:g602454; PID:g602455
REFERENCE
A45817
#authors Miller, M.D.; Hata, S.; Malefyt, R.D.W.; Krangel, M.S.
#journal J. Immunol. (1989) 143:2907-2916
#title A novel polypeptide secreted by activated human T
lymphocytes.
#cross-references MUID:90038522
#accession B45817
##molecule_type mRNA
##residues 7-55,'I',57-79,'T',81-92 ##label MIL
##cross-references GB:M57503; NID:g339726; PID:g339727
REFERENCE
A30552
#authors Brown, K.D.; Zurawski, S.M.; Mosmann, T.R.; Zurawski, G.
#journal J. Immunol. (1989) 142:679-687
#title A family of small inducible proteins secreted by leukocytes
are members of a new superfamily that includes leukocyte
and fibroblast-derived inflammatory agents, growth factors,
and indicators of various activation processes.
#cross-references MUID:89093958
#accession D30552
##molecule_type mRNA
##residues 1-39,'REASS',46-92 ##label BRO
##cross-references GB:M23502; NID:g533212; PID:g533213
```

```
REFERENCE
A52206
#authors Clore, G.M.; Lodi, P.J.; Garrett, D.S.; Gronenborn, A.M.
#submission submitted to the Brookhaven Protein Data Bank, January 1994
#cross-references PDB:1H0M
#contents annotation; conformation and disulfide bond assignments by
(1)H-NMR, residues 24-92
COMMENT This protein is secreted by activated lymphocytes and monocytes. It
is bound by chemokine (C-C) receptor 5 (see PIR:A43113) and
receptor 1 (see PIR:A45177).
GENETICS
#gene GDB:LAG1
##cross-references GDB:127451; OMIM:153335
#map_position 17q21-17q21
#introns 26/1; 64/2
CLASSIFICATION
KEYWORDS #superfamily macrophage inflammatory protein
chemotaxis; cytokine; inflammation
FEATURE
1-23 #domain signal sequence #status predicted #label SIG\
24-92 #product macrophage inflammatory protein 1-beta #status
experimental
34-58,35-74 #disulfide_bonds #status experimental
SUMMARY #length 92 #molecular_weight 10212 #checksum 7597
Query Match 92.5%; Score 86; DB 1; Length 92;
Best Local Similarity 91.7%; Pred. No. 9.32e-06;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Db 72 QVCADPSESWVQ 83
QY 1 QVCADPSESWVQ 12
RESULT 5
ENTRY I46730 #type complete
TITLE immune activation gene 2 - rabbit
ORGANISM #formal_name Oryctolagus cuniculus #common_name domestic
rabbit
DATE 14-Feb-1997 #sequence_revision 14-Feb-1997 #text_change
09-May-1997
ACCESSIONS I46730
REFERENCE I46730
#authors Mori, S.; Goto, K.; Goto, F.; Mutakami, K.; Ohkawara, S.;
Yoshinaga, M.
#journal Int. Immunol. (1994) 6:149-156
#title Dynamic changes in mRNA expression of neutrophils during the
course of acute inflammation in rabbits.
#cross-references MUID:94198229
#accession I46730
##status preliminary; translated from GB/EMBL/DBJ
##molecule_type mRNA
##residues 1-92 ##label MOR
##cross-references GB:D17402; NID:g599577; PID:g599578
CLASSIFICATION #superfamily macrophage inflammatory protein
SUMMARY #length 92 #molecular_weight 10066 #checksum 5637
Query Match 89.2%; Score 83; DB 2; Length 92;
Best Local Similarity 83.3%; Pred. No. 3.95e-05;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
Db 72 QVCADPSESWVQ 83
QY 1 QVCADPSESWVQ 12
RESULT 6
ENTRY JE0177 #type complete
TITLE lymphocyte and monocyte chemoattractant CC chemokine - human
ORGANISM #formal_name Homo sapiens #common_name man
DATE 10-Jul-1998 #sequence_revision 10-Jul-1998 #text_change
17-Mar-1999
ACCESSIONS JE0177
REFERENCE JE0177
#authors Youn, B.S.; Zhang, S.; Broxmeyer, H.E.; Antol, K.; Fraser
```

Jr., M.J.; Hangoc, G.; Kwon, B.S.
 Biochem. Biophys. Res. Commun. (1998) 247:217-222
 Isolation and characterization of LMC, a novel lymphocyte and
 monocyte chemoattractant human CC chemokine, with
 myelosuppressive activity.
 #cross-references MUID:98308096
 #accession J0177
 #molecule_type mRNA
 ##residues 1-120 ##label YOU
 SUMMARY #length 120 #molecular-weight 13600 #checksum 230

Query Match 84.9%; Score 79; DB 2; Length 120;
 Best Local Similarity 50.0%; Pred. No. 2.64e-04;
 Matches 6; Conservative 6; Mismatches 0; Indels 0; Gaps 0;
 Db 74 EVCTNPDDWQ 85
 QY 1 QVADPSEEWQ 12

RESULT 7
 ENTRY I52322 #type complete
 TITLE macrophage inflammatory protein-lalpha - rat
 ORGANISM #formal_name Rattus norvegicus #common_name Norway rat
 DATE 29-May-1998 #sequence_revision 29-May-1998 #text_change 02-Jul-1998
 ACCESSIONS I52322
 #authors Shi, M.M.; Godleski, J.J.; Paulauskis, J.D.
 #journal Biochem. Biophys. Res. Commun. (1995) 211:289-295
 #title Molecular cloning and posttranscriptional regulation of
 macrophage inflammatory protein-1 alpha in alveolar
 macrophages.
 #cross-references MUID:95298037
 #accession I52322
 ##status Preliminary; translated from GB/EMBL/DBJ
 ##molecule_type mRNA
 ##residues 1-92 ##label RES
 ##cross-references EMBL:U22414; NID:g790632; PID:g790633
 CLASSIFICATION #superfamily macrophage inflammatory protein
 SUMMARY #length 92 #molecular-weight 10335 #checksum 3184

Query Match 83.98%; Score 78; DB 2; Length 92;
 Best Local Similarity 75.0%; Pred. No. 4.22e-04;
 Matches 9; Conservative 1; Mismatches 2; Indels 0; Gaps 0;
 Db 71 QICADPKETWQ 82
 QY 1 QVADPSEEWQ 12

RESULT 8
 ENTRY I48147 #type complete
 TITLE monocyte chemoattractant protein-1 - guinea pig
 ORGANISM #formal_name Cavia porcellus #common_name guinea pig
 DATE 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 09-May-1997
 ACCESSIONS I48147
 #authors Yoshimura, T.
 #journal J. Immunol. (1993) 150:5025-5032
 #title cDNA cloning of guinea pig monocyte chemoattractant protein-1
 and expression of the recombinant protein.
 #cross-references MUID:93267104
 #accession I48147
 ##status Preliminary; translated from GB/EMBL/DBJ
 ##molecule_type mRNA
 ##residues 1-120 ##label RES
 ##cross-references GB:L04985; NID:g349820; PID:g349821
 GENETICS MCP-1
 #gene #superfamily macrophage inflammatory protein
 CLASSIFICATION #length 120 #molecular-weight 13741 #checksum 9252
 SUMMARY

Query Match 82.8%; Score 77; DB 2; Length 120;
 Best Local Similarity 66.7%; Pred. No. 6.72e-04;
 Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
 Db 71 EVCADPTQKWQ 82
 QY 1 QVADPSEEWQ 12

RESULT 9
 ENTRY A30209 #type complete
 TITLE PDGF-inducible JE glycoprotein precursor - mouse
 ORGANISM #formal_name Mus musculus #common_name house mouse
 DATE 01-Dec-1989 #sequence_revision 01-Dec-1989 #text_change 01-May-1998
 ACCESSIONS A30209; A44771; A30861
 #authors Rollins, B.J.; Morrison, E.D.; Stiles, C.D.
 #journal Proc. Natl. Acad. Sci. U.S.A. (1988) 85:3738-3742
 #title Cloning and expression of JE, a gene inducible by
 platelet-derived growth factor and whose product has
 cytokine-like properties.
 #cross-references MUID:88234501
 #accession A30209
 ##molecule_type DNA
 ##residues 1-148 ##label ROL
 ##cross-references GB:M19681; NID:g193486; PID:g387168; GB:M19682
 REFERENCE A44771
 #authors Kawahara, R.S.; Deuel, T.F.
 #journal J. Biol. Chem. (1989) 264:679-682
 #title Platelet-derived growth factor-inducible gene JE is a member
 of a family of small inducible genes related to platelet
 factor 4.
 #cross-references MUID:89093129
 #accession A44771
 ##molecule_type DNA; mRNA
 ##residues 1-148 ##label KA2
 ##cross-references GB:J04467; NID:g193488; PID:g387169
 GENETICS
 #gene JE
 #introns 26/1: 65/2
 CLASSIFICATION #superfamily macrophage inflammatory protein
 KEYWORDS cytokine; glycoprotein
 FEATURE 126
 #binding_site carbohydrate (Asn) (covalent) #status predicted
 SUMMARY #length 148 #molecular-weight 16326 #checksum 5278

Query Match 82.8%; Score 77; DB 2; Length 148;
 Best Local Similarity 75.0%; Pred. No. 6.72e-04;
 Matches 9; Conservative 1; Mismatches 2; Indels 0; Gaps 0;
 Db 73 EVCADPKKEWQ 84
 QY 1 QVADPSEEWQ 12

RESULT 10
 ENTRY S07723 #type complete
 TITLE immediate-early serum-responsive protein JE precursor - rat
 ALTERNATE_NAMES monocyte chemoattractant protein-1
 ORGANISM #formal_name Rattus norvegicus #common_name Norway rat
 DATE 29-Jan-1993 #sequence_revision 29-Jan-1993 #text_change 13-Nov-1998
 ACCESSIONS S07723; JN0128
 #authors Timmers, H.T.M.; Pronk, G.J.; Bos, J.L.; van der Eb, A.J.
 #journal Nucleic Acids Res. (1990) 18:23-34
 #title Analysis of the rat JE gene promoter identifies an AP-1
 binding site essential for basal expression but not for TPA
 induction.
 #cross-references MUID:90174947

Query Match 82.8%; Score 77; DB 2; Length 148;
 Best Local Similarity 75.0%; Pred. No. 6.72e-04;
 Matches 9; Conservative 1; Mismatches 2; Indels 0; Gaps 0;
 Db 73 EVCADPKKEWQ 84
 QY 1 QVADPSEEWQ 12

RESULT 10
 ENTRY S07723 #type complete
 TITLE immediate-early serum-responsive protein JE precursor - rat
 ALTERNATE_NAMES monocyte chemoattractant protein-1
 ORGANISM #formal_name Rattus norvegicus #common_name Norway rat
 DATE 29-Jan-1993 #sequence_revision 29-Jan-1993 #text_change 13-Nov-1998
 ACCESSIONS S07723; JN0128
 #authors Timmers, H.T.M.; Pronk, G.J.; Bos, J.L.; van der Eb, A.J.
 #journal Nucleic Acids Res. (1990) 18:23-34
 #title Analysis of the rat JE gene promoter identifies an AP-1
 binding site essential for basal expression but not for TPA
 induction.
 #cross-references MUID:90174947

```

#accession S07723
#molecule_type DNA
#residues 1-148 #label TIM
#cross-references EMBL:X17053; NID:g55530; PID:g55531
REFERENCE
#authors Yoshimura, T.; Takeya, M.; Takahashi, K.
#journal Biochem. Biophys. Res. Commun. (1991) 174:504-509
#title Molecular cloning of rat monocyte chemoattractant protein-1
(MCP-1) and its expression in rat spleen cells and tumor
cell lines.
#cross-references MUID:91128376
#accession JN0128
#molecule_type mRNA
#residues 1-148 #label YOS
#cross-references GB:M57441; NID:g205333; PID:g205334
#experimental_source spleen cells
#note the authors translated the codon GAA for residue 62 as
Lys and GCT for residue 63 as Leu
GENETICS
#introns 26/1; 65/2
#superfamily macrophage inflammatory protein
CLASSIFICATION
#domain signal sequence #status predicted #label SIG\
FEATURE
1-23 #product immediate-early serum-responsive protein JE
24-148 #status predicted #label MAT
SUMMARY
#length 148 #molecular-weight 16460 #checksum 4876
Query Match 82.8%; Score 77; DB 2; Length 148;
Best Local Similarity 66.7%; Pred. No. 6.72e-04;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
Db 73 EICADPNKEWQ 84
:||||: ||||
QY 1 QVCADPSEWVQ 12
RESULT 11
ENTRY A54678 #type complete
TITLE monocyte chemoattractant protein 3 precursor - human
ALTERNATE_NAMES MCP-3
ORGANISM #formal_name Homo sapiens #common_name man
DATE 28-Oct-1994 #sequence_revision 28-Oct-1994 #text_change
17-Mar-1999
ACCESSIONS A54678; JCl1478; S32222
REFERENCE A54678
#authors Opdenakker, G.; Fiten, P.; Nys, G.; Froyen, G.; Van Roy, N.;
Spelman, F.; Laureys, G.; Van Damme, J.
#journal Genomics (1994) 21:403-408
#title The human MCP-3 gene (SCYA7): cloning, sequence analysis, and
assignment to the C-C chemokine gene cluster on chromosome
17q11.2-q12
#cross-references MUID:94375065
#accession A54678
#molecule_type DNA
#residues 1-109 #label OPD
#cross-references GB:X72309
REFERENCE JCl1478
#authors Opdenakker, G.; Froyen, G.; Fiten, P.; Proost, P.; Van Damme,
J.
#journal Biochem. Biophys. Res. Commun. (1993) 191:535-542
#title Human monocyte chemoattractant protein-3 (MCP-3): Molecular
cloning of the cDNA and comparison with other chemokines.
#cross-references MUID:93213290
#accession JCl1478
#molecule_type mRNA
#residues 1-109 #label OP2
REFERENCE S32222
#authors Minty, A.; Chalon, P.; Guillemot, J.C.; Kaghad, M.; Liauzun,
P.; Macazin, M.; Miloux, B.; Minty, C.; Ramond, P.; Vita,
N.; Luperker, J.; Shire, D.; Ferrara, P.; Caput, D.
#submission submitted to the EMBL Data Library, March 1993
#description Molecular cloning of MCP-3: a human monocyte-derived monocyte
chemoattractant protein.

```

```

#accession S32222
#molecule_type mRNA
#residues 1-109 #label MIN
#cross-references EMBL:X71087; NID:g288396; PID:g288397
COMMENT This protein induces proteinase secretion and chemotaxis by
macrophages and monocytes.
GENETICS
#gene GDB:SCYA7; SCYA6; MCP-3
#cross-references GDB:138473; OMIM:158106
#map_position 17q11-17q12
#introns 36/1; 75/2
CLASSIFICATION
#superfamily macrophage inflammatory protein
KEYWORDS cytokine; glycoprotein; inflammation
FEATURE
1-33 #domain signal sequence #status predicted #label SIG\
34-109 #product monocyte chemoattractant protein 3 #status
predicted #label MAT\
39 #binding_site carbohydrate (Asn) (covalent) #status
predicted
SUMMARY
#length 109 #molecular-weight 12356 #checksum 1535
Query Match 80.6%; Score 75; DB 2; Length 109;
Best Local Similarity 58.3%; Pred. No. 1.70e-03;
Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;
Db 83 EICADPTQKWQ 94
:||||: ||||
QY 1 QVCADPSEWVQ 12
RESULT 12
ENTRY C30552 #type complete
TITLE macrophage inflammatory protein 1-beta precursor - mouse
ALTERNATE_NAMES H400; SIS gamma; T-cell activation protein gamma
ORGANISM #formal_name Mus musculus #common_name house mouse
DATE 28-Aug-1989 #sequence_revision 28-Aug-1989 #text_change
13-Nov-1998
ACCESSIONS C30552; JL0088; PS0304; S22042
REFERENCE A30552
#authors Brown, K.D.; Zurawski, S.M.; Mosmann, T.R.; Zurawski, G.
#journal J. Immunol. (1989) 142:679-687
#title A family of small inducible proteins secreted by leukocytes
are members of a new superfamily that includes leukocyte
and fibroblast-derived inflammatory agents, growth factors,
and indicators of various activation processes.
#cross-references MUID:89093958
#accession C30552
#molecule_type mRNA
#residues 1-92 #label BRO
#cross-references GB:M23503; NID:g533244; PID:g533245
REFERENCE JL0088
#authors Sherry, B.; Tekamp-Olson, P.; Gallegos, C.; Bauer, D.;
Davatelis, G.; Wolpe, S.D.; Masiarz, F.; Coit, D.; Cerami,
A.
#journal J. Exp. Med. (1988) 168:2251-2259
#title Resolution of the two components of macrophage inflammatory
protein 1, and cloning and characterization of one of those
components, macrophage inflammatory protein 1 beta.
#cross-references MUID:89067830
#accession JL0088
#molecule_type mRNA
#residues 1-92 #label SHE
#cross-references GB:M35590; NID:g199696; PID:g199697
#accession PS0304
#molecule_type protein
#residues 24-33, 'XX', '36', 'X', '38 #label SH2
REFERENCE S22042
#authors Daubersies, P.; Lepretre, F.; Baillieu, B.; Grove, M.;
Pragnell, I.; Plumb, M.
#submission submitted to the EMBL Data Library, October 1991
#description Sequence of the murine macrophage inflammatory protein 1b
gene.
#accession S22042

```

```

##status      preliminary
##molecule_type DNA
##residues    1-92 ##label DAU
##cross-references EMBL:X62502; NID:g53126; PID:g53127
COMMENT      This protein is a monokine.
GENETICS
  introns    26/1; 64/2
  CLASSIFICATION #superfamily macrophage inflammatory protein
  KEYWORDS    glycoprotein
  FEATURE
    1-23
    24-92
  76
  SUMMARY    #length 92 #molecular-weight 10168 #checksum 7516
  Query Match 78.5%; Score 73; DB 2; Length 92;
  Best Local Similarity 72.7%; Pred. No. 4.24e-03;
  Matches 8; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
  Db 72 QICANPSEPVW 82
  QY 1 QVCADPSEEWV 11

RESULT 13
ENTRY
  TITLE      monocyte chemoattractant protein-2 precursor - pig
  ORGANISM   Sus scrofa domestica #common_name domestic pig
  DATE       24-Feb-1995 #sequence_revision 24-Feb-1995 #text_change
  17-Mar-1999
ACCESSIONS
  JC2417
  JC2417
  #authors   Hosang, K.; Knoke, I.; Klaudiny, J.; Wempe, F.; Wuttke, W.;
  Scheit, K.H.
  #journal   Biochem. Biophys. Res. Commun. (1994) 205:148-153
  #title     Porcine luteal cells express monocyte chemoattractant
  protein-2 (MCP-2): Analysis by cDNA cloning and northern
  analysis.
  #cross-references MUID:95091716
  #accession JC2417
  ##molecule_type mRNA
  ##residues 1-99 ##label HOS
  ##experimental_source corpus luteum
  CLASSIFICATION #superfamily macrophage inflammatory protein
  FEATURE
    1-23
    24-99
  SUMMARY    #length 99 #molecular-weight 10903 #checksum 7556
  Query Match 78.5%; Score 73; DB 2; Length 99;
  Best Local Similarity 66.7%; Pred. No. 4.24e-03;
  Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;
  Db 73 EVCADPQOKWQV 84
  QY 1 QVCADPSEEWVQ 12

RESULT 14
ENTRY
  TITLE      monocyte chemoattractant protein 1 precursor - human
  ALTERNATE_NAMES
    GDCF-1; monocyte chemoattractant factor 1; MCAF;
    MCP-1; monocyte chemoattractant factor 1; monocyte secretory
    protein; tumor-derived chemotactic factor
    glioma-derived chemotactic factor 2 (GDCF-2)
  ORGANISM   Homo sapiens #common_name man
  DATE       20-Feb-1993 #sequence_revision 20-Feb-1993 #text_change
  20-Mar-1998
  ACCESSIONS
    A35474; A33476; S03339; I51841; A60299; A32300; A32396;
    A34561; I57488; JC1096

```

REFERENCE

#authors Shyy, Y.J.; Li, Y.S.; Kolattukudy, P.E.
 #journal Biochem. Biophys. Res. Commun. (1990) 169:346-351
 #title Structure of human monocyte chemotactic protein gene and its regulation by TPA.
 #cross-references MUID:90290466
 #accession A35474
 ##molecule_type DNA
 ##residues 1-99 ##label SHY
 ##cross-references GB:M37719; NID:g187447; PID:g487124

REFERENCE

#authors Rollins, B.J.; Stier, P.; Ernst, T.; Wong, G.G.
 #journal Mol. Cell. Biol. (1989) 9:4687-4695
 #title The human homolog of the JE gene encodes a monocyte secretory protein.
 #cross-references MUID:90097880
 #accession A33476
 ##molecule_type mRNA
 ##residues 1-99 ##label ROL
 ##cross-references GB:M30816; GB:M31625; GB:M31626; NID:g188701;

REFERENCE

#authors Yoshimura, T.; Yuhki, N.; Moore, S.K.; Appella, E.; Lerman, M.I.; Leonard, E.J.
 #journal FEBS Lett. (1989) 244:487-493
 #title Human monocyte chemoattractant protein-1 (MCP-1). Full-length cDNA cloning, expression in mitogen-stimulated blood mononuclear leukocytes, and sequence similarity to mouse competence gene JE.
 #cross-references MUID:89153605
 #accession S03339
 ##status not compared with conceptual translation
 ##molecule_type mRNA
 ##residues 1-99 ##label YOS
 ##cross-references GB:X14768; NID:g34513; PID:g34514
 ##experimental_source glioma cell line U-105MG

REFERENCE

#authors Yoshimura, T.; Leonard, E.J.
 #journal Adv. Exp. Med. Biol. (1991) 305:47-56
 #title Human monocyte chemoattractant protein-1 (MCP-1).
 #cross-references MUID:92095166
 #accession I51841
 ##status preliminary; translated from GB/EMBL/DBJ
 ##molecule_type mRNA
 ##residues 1-99 ##label YO2
 ##cross-references GB:S71513; NID:g240867; PID:g240868

REFERENCE

#authors Bottazzi, B.; Colotta, F.; Sica, A.; Nobili, N.; Mantovani, A.
 #journal Int. J. Cancer (1990) 45:795-797
 #title A chemoattractant expressed in human sarcoma cells (tumor-derived chemotactic factor, TDCF) is identical to monocyte chemoattractant protein-1/monocyte chemotactic and activating factor (MCP-1/MCAF).
 #accession A60299
 ##status not compared with conceptual translation
 ##molecule_type mRNA
 ##residues 1-99 ##label BOT

REFERENCE

#authors Furutani, Y.; Nomura, H.; Notake, M.; Oyama, Y.; Fukui, T.; Yamada, M.; Larsen, C.G.; Oppenheim, J.J.; Matsushima, K.
 #journal Biochem. Biophys. Res. Commun. (1989) 159:249-255
 #title Cloning and sequencing of the cDNA for human monocyte chemotactic and activating factor (MCAF).
 #cross-references MUID:89165862
 #accession A32300
 ##status not compared with conceptual translation
 ##molecule_type mRNA
 ##residues 1-99 ##label FUR

REFERENCE

#authors Robinson, E.A.; Yoshimura, T.; Leonard, E.J.; Tanaka, S.; Griffin, P.R.; Shabanowitz, J.; Hunt, D.F.; Appella, E.

Sat Feb 5 15:13:59 2000

```

#journal
#title

#cross-references MUID:89184525
#accession A32396
##molecule_type protein
##residues 'X',25-99 #label ROB
REFERENCE
#authors
Decock, B.; Conings, R.; Lenaerts, J.P.; Billiau, A.; Van
Damme, J.
Biochem. Biophys. Res. Commun. (1990) 167:904-909
#journal
#title Identification of the monocyte chemotactic protein from human
osteosarcoma cells and monocytes: detection of a novel
N-terminally processed form.
#cross-references MUID:90211336
#accession A34561
##molecule_type protein
##residues 29-33,'XX',36-52;82-92 #label DBC
REFERENCE
#authors
Li, Y.S.; Shyy, Y.J.; Wright, J.G.; Valente, A.J.; Cornhill,
J.F.; Kolattukudy, P.E.
Mol. Cell. Biochem. (1993) 126:61-68
#journal
#title The expression of monocyte chemotactic protein (MCP-1) in
human vascular endothelium in vitro and in vivo.
#cross-references MUID:94150478
#accession I57488
##molecule_type mRNA
##residues 1-99 #label LIY
##cross-references GB:569738; NID:9545464; PID:9545465
REFERENCE
#authors
Ye, Q.N.; Su, G.F.; Yuan, Y.; Huang, C.F.
Chinese J. Microbiol. Immunol. (1994) 14:29-32
#journal
#title The PCR, cloning and sequencing of human monocyte
chemoattractant protein-1 (MCP-1) gene.
#accession JCI096
##molecule_type mRNA
##residues 24-28,'Q',30-99 #label YEY
GENETICS
#gene GDB:SCYA2
##cross-references GDB:125279; OMIM:158105
#map_position 17q11.2-17q12
CLASSIFICATION
#superfamily macrophage inflammatory protein
KEYWORDS
cytokine; glycoprotein; inflammation; pyroglutamic acid
FEATURE
1-23 #domain signal sequence #status predicted #label SIG\
24-99 #product monocyte chemoattractant protein 1 #status
experimental #label MAT\
29-99 #product monocyte chemoattractant protein 1, short form
#status experimental #label MAT2\
24 #modified site pyrrolidone carboxylic acid (Gln) (in
mature form) #status experimental\
37 #binding_site carbohydrate (Asn) (covalent) #status
predicted
SUMMARY
#length 99 #molecular_weight 11025 #checksum 7984
Query Match 77.4%; Score 72; DB 2; Length 99;
Best Local Similarity 58.3%; Pred. No. 6,67e-03;
Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;
Db 73 EICADPKQKWQ 84
:::
QY 1 QVCADPSEEWQ 12
:::

RESULT 15
ENTRY
#type complete
TITLE monocyte chemoattractant cytokine RANTES precursor - mouse
ALTERNATE_NAMES Murantes
ORGANISM #formal_name Mus musculus #common_name house mouse
DATE 18-Jun-1993 #sequence_revision 16-Aug-1996 #text_change
22-Jan-1999

#journal
#title

#cross-references MUID:94132613
#accession I48875
##molecule_type DNA
##residues 1-91 #label DAN
##cross-references EMBL:U02298; NID:9460090; PID:9460091
REFERENCE
#authors
Schall, T.J.; Simpson, N.J.; Mak, J.Y.
Eur. J. Immunol. (1992) 22:1477-1481
#journal
#title Molecular cloning and expression of the murine RANTES
cytokine: structural and functional conservation between
mouse and man.
#cross-references MUID:92289805
#accession A46539
##molecule_type mRNA
##residues 1-18,'A',20-91 #label SCH
##cross-references GB:S37648; NID:9250207; PID:9250208
##experimental_source macrophage cell line PU5-1.8
##note sequence extracted from NCBI backbone (NCBIN:106768,
NCBIP:106770)
REFERENCE
#authors
Shin, H.S.; Drysdale, B.E.; Shin, M.L.; Noble, P.W.; Fisher,
S.N.; Paznekas, W.A.
Mol. Cell. Biol. (1994) 14:2914-2925
#journal
#title Definition of a lipopolysaccharide-responsive element in the
5'-flanking regions of Murantes and crg-2.
#cross-references MUID:94217689
#accession I48654
##status translation not shown; translated from GB/EMBL/DBJ
##molecule_type DNA
##residues 1-91 #label SHI
##cross-references EMBL:X70675; NID:9475205; PID:9475206
REFERENCE
#authors
Neilson, E.G.; Krensky, A.
Kidney Int. (1992) 41:220-225
#journal
#title Isolation and characterization of cDNA from renal tubular
epithelium encoding murine Rantes: A small interferon from
the Scy superfamily.
#cross-references MUID:92277990
#accession I56970
##status translated from GB/EMBL/DBJ
##molecule_type mRNA
##residues 1-40,'E',42-91 #label NEI
##cross-references GB:M7747; NID:9200649; PID:9200650
COMMENT This chemoattractant for monocytes but not neutrophils is an
immediate-early response protein to LPS stimulation.
GENETICS
26/1; 63/2
#introns
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS chemotaxis; cytokine; immediate-early protein; inflammation
FEATURE
1-23 #domain signal sequence #status predicted #label SIG\
24-91 #product monocyte chemoattractant cytokine RANTES
#status predicted #label MAT
SUMMARY
#length 91 #molecular_weight 10071 #checksum 3010
Query Match 76.3%; Score 71; DB 1; Length 91;
Best Local Similarity 66.7%; Pred. No. 1,05e-02;
Matches 8; Conservative 1; Mismatches 3; Indels 0; Gaps 0;
Db 71 QVCANPEKWWQ 82
:::
QY 1 QVCADPSEEWQ 12
:::

Search completed: Fri Feb 4 17:21:44 2000

```

Sat Feb 5 15:13:59 2000

US-09-150-813-42.rpr

Page 8

Job time : 31 secs.

MIPRELH
(TM)

Release 3.1A John F. Collins, Biocomputing Research Unit.
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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 17:20:38 2000; MasPar time 3.60 Seconds
70.794 Million cell updates/sec

Tabular output not generated.

Title: >US-09-150-813-42
Description: (1-12) from US09150813.pcp
Perfect Score: 93
Sequence: 1 QVCADPSEEWQ 12

Scoring table: PAM 150
Gap 15

Searched: 170751 seqs, 21266608 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: a-geneseq35
1:part1 2:part3 3:part4 4:part5 5:part6 6:part7 7:part8
8:part9 9:part10 10:part11 11:part12 12:part13 13:part14
14:part15 15:part16 16:part17 17:part18 18:part19
19:part20 20:part21 21:part22 22:part23 23:part24
24:part25 25:part26 26:part27 27:part28 28:part29
29:part30 30:part31 31:part32 32:part33 33:part34
34:part35 35:part36 36:part37 37:part38 38:part39

Statistics: Mean 18.220; Variance 70.223; scale 0.259

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES				
Result No.	Score	Query Match	Description	Pred. No.
1	93	100.0	63 7 R38974 NI-6 LD78 Pro7>Ser.	5.88e-02
2	93	100.0	66 7 R38948 NI-3 LD78.	5.88e-02
3	93	100.0	69 7 R38982 LD78 Lys60>Ser.	5.88e-02
4	93	100.0	69 7 R38983 LD78 Asp64>Ser.	5.88e-02
5	93	100.0	69 7 R38938 LD78 Phe28>Glu.	5.88e-02
6	93	100.0	69 7 R38955 LD78 Phe28>Glu.	5.88e-02
7	93	100.0	69 7 R38932 LD78 Asp26>Ala.	5.88e-02
8	93	100.0	69 7 R38931 LD78 Phe23>Asn.	5.88e-02
9	93	100.0	69 7 R38930 LD78 Arg17>Ser.	5.88e-02
10	93	100.0	69 7 R38937 LD78 Lys60>Gln.	5.88e-02
11	93	100.0	69 7 R38936 LD78 Arg47>Glu.	5.88e-02
12	93	100.0	69 7 R38954 LD78 Phe12>Ala.	5.88e-02
13	93	100.0	69 7 R38929 LD78 Phe28>Ser.	5.88e-02
14	93	100.0	69 7 R38943 LD78 Glu29>Arg.	5.88e-02
15	93	100.0	69 7 R38944 LD78 Gln18>Glu.	5.88e-02
16	93	100.0	69 7 R38958 LD78 Arg47>Ser.	5.88e-02

17	93	100.0	69 7 R38939 LD78 Ile24>Asn.	5.88e-02
18	93	100.0	69 7 R38959 LD78 Glu29>Ser.	5.88e-02
19	93	100.0	69 7 R38941 LD78 Phe28>Glu.	5.88e-02
20	93	100.0	69 7 R38927 LD78 Lys44>Glu.	5.88e-02
21	93	100.0	69 7 R38928 LD78 Ala9>Ser.	5.88e-02
22	93	100.0	69 7 R38945 LD78 Arg17>Ser.	5.88e-02
23	93	100.0	69 7 R38961 LD78 Asp5>Arg.	5.88e-02
24	93	100.0	69 7 R38960 LD78 Gln18>Ser.	5.88e-02
25	93	100.0	69 7 R38977 LD78 Phe23>Ala.	5.88e-02
26	93	100.0	69 7 R38979 LD78 Arg45>Ser.	5.88e-02
27	93	100.0	69 7 R38978 LD78 Lys44>Ser.	5.88e-02
28	93	100.0	69 7 R39085 LD78 Leu65>Ala.	5.88e-02
29	93	100.0	69 7 R39086 LD78 Glu68>Ser.	5.88e-02
30	93	100.0	69 7 R39084 LD78 Lys36>Ser.	5.88e-02
31	93	100.0	69 7 R39083 LD78 Asp26>Ala.	5.88e-02
32	93	100.0	69 7 R38965 LD78 Ala3>Glu.	5.88e-02
33	93	100.0	69 7 R38971 LD78 Ala3>Ser.	5.88e-02
34	93	100.0	69 7 R38970 LD78 Leu2>Ala.	5.88e-02
35	93	100.0	69 7 R39082 LD78 Asp26>Ala.	5.88e-02
36	93	100.0	70 7 R38949 Ala-Ser1>Pro LD78.	5.88e-02
37	93	100.0	71 7 R38946 Ser-Ala-LD78.	5.88e-02
38	93	100.0	72 7 R38950 Leu-Ser-Ala-Ser1>Pro	5.88e-02
39	93	100.0	72 7 R38947 Leu-Ser-Ala-Ser1>Pro	5.88e-02
40	93	100.0	72 7 R38962 LD78 Arg17>Glu.	5.88e-02
41	93	100.0	92 39 W82722 Human M1A protein.	5.88e-02
42	93	100.0	92 12 R62618 Variant stem cell inh	5.88e-02
43	93	100.0	93 39 W82721 Human M10 protein.	5.88e-02
44	93	100.0	93 12 R62616 Stem cell inhibitor,	5.88e-02
45	93	100.0	93 13 R67097 MIP-1-alpha.	5.88e-02

ALIGNMENTS

RESULT 1

ID R38974 standard; Protein; 63 AA.

AC R38974;

DT 23-NOV-1993 (first entry)

DE NI-6 LD78 Pro7>Ser.

KW SCI; stem cell inhibition; LD78; ACT2; MIP-1alpha;

KW macrophage inflammatory protein; multimer; tumour therapy;

KW psoriasis; hyperproliferation.

OS Homo sapiens.

PN W09313206-A.

PD 08-JUL-1993.

PF 23-DEC-1992; G02390.

PR 23-DEC-1991; GB-027319.

PR 14-OCT-1992; GB-021587.

PA (BRBI-) BRITISH BIO-TECHNOLOGY LTD.

PI Craig S. Czaplowski LG, Edwards RM, Gilbert RJ;

PI Hunter MG;

DR WPI; 93-227322/28.

PT Protein with stem cell inhibition activity, e.g. LD78 or MIP-1

PT alpha - unable to form stable multimer higher than dodecamer,

PT providing better tissue penetration

PS Example 49; Page 68; 294pp; English.

CC Analogues of natural stem cell inhibitors, such as LD78 and MIP-1

CC alpha, having mutations to prevent or reduce multimer formation

CC beyond certain stages (e.g. dodecamer), have improved solution

CC properties leading to enhanced productivity and greater therapeutic

CC utility as stem cell protective agents. The analogues may be used

CC in tumour therapy, psoriasis or other diseases involving hyper-

CC proliferative stem cells.

CC Most pref. LD78 analogues are Phe12>Gln, Lys44>Ser, Arg17>Glu (with

CC Gln18>Glu) and, esp., Asp26>Ala and Glu66>Ser. Pref. MIP-1alpha

CC analogues correspond to the pref. LD78 analogues.

SQ Sequence 63 AA;

Query Match 100.0%; Score 93; DB 7; Length 63;

Best Local Similarity 100.0%; Pred. No. 5.88e-02;

Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 42 qvcadpseewwq 53

|||||||

QY 1 QVCADPSEEWQ 12

RESULT 2

ID R38948 standard; Protein; 66 AA.
 AC R38948;
 DT 23-NOV-1993 (first entry)
 DE NL-3 LD78.
 KW SCI; stem cell inhibition; LD78; ACT2; MIP-lalpa;
 KW macrophage inflammatory protein; multimer; tumour therapy;
 KW psoriasis; hyperproliferation.
 OS Homo sapiens.
 PN WO9313206-A.
 PD 08-JUL-1993.
 PF 23-DEC-1992; G02390.
 PR 23-DEC-1991; GB-027319.
 PR 14-OCT-1992; GB-021587.
 PA (BRBI-) BRITISH BIO-TECHNOLOGY LTD.
 PI Craig S., Czaplowski LG, Edwards RM, Gilbert RJ;
 PI Hunter MG;
 DR WPI: 93-227322/28.
 PT Protein with stem cell inhibition activity, e.g. LD78 or MIP-1
 PT alpha - unable to form stable multimer higher than dodecamer,
 PT providing better tissue penetration
 PS Example 23; Page 58; 294pp; English.
 CC Analogues of natural stem cell inhibitors, such as LD78 and MIP-
 CC lalpa, having mutations to prevent or reduce multimer formation
 CC beyond certain stages (e.g. dodecamer), have improved solution
 CC properties leading to enhanced productivity and greater therapeutic
 CC utility as stem cell protective agents. The analogues may be used
 CC in tumour therapy, psoriasis or other diseases involving hyper-
 CC proliferative stem cells.
 CC Most pref. LD78 analogues are Phe12>Gln, Lys44>Ser, Arg17>Glu (with
 CC Gln18>Glu) and, esp., Asp26>Ala and Glu66>Ser. Pref. MIP-lalpa
 CC analogues correspond to the pref. LD78 analogues.
 SQ Sequence 66 AA;

Query Match 100.0%; Score 93; DB 7; Length 66;
 Best Local Similarity 100.0%; Pred. No. 5.88e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 45 qvcadpseewq 56
 | | | | | | | | | |
 QY 1 QVCADPSEEWQ 12

RESULT 3

ID R38982 standard; Protein; 69 AA.
 AC R38982;
 DT 23-NOV-1993 (first entry)
 DE LD78 Lys60>Ser.
 KW SCI; stem cell inhibition; LD78; ACT2; MIP-lalpa;
 KW macrophage inflammatory protein; multimer; tumour therapy;
 KW psoriasis; hyperproliferation.
 OS Homo sapiens.
 PN WO9313206-A.
 PD 08-JUL-1993.
 PF 23-DEC-1992; G02390.
 PR 23-DEC-1991; GB-027319.
 PR 14-OCT-1992; GB-021587.
 PA (BRBI-) BRITISH BIO-TECHNOLOGY LTD.
 PI Craig S., Czaplowski LG, Edwards RM, Gilbert RJ;
 PI Hunter MG;
 DR WPI: 93-227322/28.
 PT Protein with stem cell inhibition activity, e.g. LD78 or MIP-1
 PT alpha - unable to form stable multimer higher than dodecamer,
 PT providing better tissue penetration
 PS Example 57; Page 70-71; 294pp; English.
 CC Analogues of natural stem cell inhibitors, such as LD78 and MIP-
 CC lalpa, having mutations to prevent or reduce multimer formation
 CC beyond certain stages (e.g. dodecamer), have improved solution
 CC properties leading to enhanced productivity and greater therapeutic
 CC utility as stem cell protective agents. The analogues may be used

CC in tumour therapy, psoriasis or other diseases involving hyper-
 CC proliferative stem cells.
 CC Most pref. LD78 analogues are Phe12>Gln, Lys44>Ser, Arg17>Glu (with
 CC Gln18>Glu) and, esp., Asp26>Ala and Glu66>Ser. Pref. MIP-lalpa
 CC analogues correspond to the pref. LD78 analogues.
 SQ Sequence 69 AA;

Query Match 100.0%; Score 93; DB 7; Length 69;
 Best Local Similarity 100.0%; Pred. No. 5.88e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 qvcadpseewq 59
 | | | | | | | | | |
 QY 1 QVCADPSEEWQ 12

RESULT 4

ID R38983 standard; Protein; 69 AA.
 AC R38983;
 DT 23-NOV-1993 (first entry)
 DE LD78 Asp64>Ser.
 KW SCI; stem cell inhibition; LD78; ACT2; MIP-lalpa;
 KW macrophage inflammatory protein; multimer; tumour therapy;
 KW psoriasis; hyperproliferation.
 OS Homo sapiens.
 PN WO9313206-A.
 PD 08-JUL-1993.
 PF 23-DEC-1992; G02390.
 PR 23-DEC-1991; GB-027319.
 PR 14-OCT-1992; GB-021587.
 PA (BRBI-) BRITISH BIO-TECHNOLOGY LTD.
 PI Craig S., Czaplowski LG, Edwards RM, Gilbert RJ;
 PI Hunter MG;
 DR WPI: 93-227322/28.
 PT Protein with stem cell inhibition activity, e.g. LD78 or MIP-1
 PT alpha - unable to form stable multimer higher than dodecamer,
 PT providing better tissue penetration
 PS Example 58; Page 71; 294pp; English.
 CC Analogues of natural stem cell inhibitors, such as LD78 and MIP-
 CC lalpa, having mutations to prevent or reduce multimer formation
 CC beyond certain stages (e.g. dodecamer), have improved solution
 CC properties leading to enhanced productivity and greater therapeutic
 CC utility as stem cell protective agents. The analogues may be used
 CC in tumour therapy, psoriasis or other diseases involving hyper-
 CC proliferative stem cells.
 CC Most pref. LD78 analogues are Phe12>Gln, Lys44>Ser, Arg17>Glu (with
 CC Gln18>Glu) and, esp., Asp26>Ala and Glu66>Ser. Pref. MIP-lalpa
 CC analogues correspond to the pref. LD78 analogues.
 SQ Sequence 69 AA;

Query Match 100.0%; Score 93; DB 7; Length 69;
 Best Local Similarity 100.0%; Pred. No. 5.88e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 qvcadpseewq 59
 | | | | | | | | | |
 QY 1 QVCADPSEEWQ 12

RESULT 5

ID R38938 standard; Protein; 69 AA.
 AC R38938;
 DT 23-NOV-1993 (first entry)
 DE LD78 Phe28>Glu.
 KW SCI; stem cell inhibition; LD78; ACT2; MIP-lalpa;
 KW macrophage inflammatory protein; multimer; tumour therapy;
 KW psoriasis; hyperproliferation.
 OS Homo sapiens.
 PN WO9313206-A.
 PD 08-JUL-1993.
 PF 23-DEC-1992; G02390.
 PR 23-DEC-1991; GB-027319.
 PR 14-OCT-1992; GB-021587.

Sat Feb 5 15:13:57 2000

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PA (BRBI-) BRITISH BIO-TECHNOLOGY LTD.
PI Craig S, Czaplowski LG, Edwards RM, Gilbert RJ;
PI Hunter MG;
DR WPI; 93-227322/28.
PT Protein with stem cell inhibition activity, e.g. LD78 or MIP-1
PT alpha - unable to form stable multimer higher than dodecamer,
PT providing better tissue penetration
PS Example 13; Page 54; 294pp; English.
CC Analogues of natural stem cell inhibitors, such as LD78 and MIP-
CC lalpa, having mutations to prevent or reduce multimer formation
CC beyond certain stages (e.g. dodecamer), have improved solution
CC properties leading to enhanced productivity and greater therapeutic
CC utility as stem cell protective agents. The analogues may be used
CC in tumour therapy, psoriasis or other diseases involving hyper-
CC proliferative stem cells.
CC Most pref. LD78 analogues are Phel2>Gln, Lys44>Ser, Arg17>Glu (with
CC Gln18>Glu) and, esp., Asp26>Ala and Glu66>Ser. Pref. MIP-lalpa
CC analogues correspond to the pref. LD78 analogues.
SQ Sequence 69 AA;

Query Match 100.0%; Score 93; DB 7; Length 69;
Best Local Similarity 100.0%; Pred. No. 5.88e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 qvcadpseewvq 59
| | | | | | | | | |
QY 1 QVCADPSEEWVQ 12

RESULT 6
ID R38955 standard; Protein; 69 AA.
AC R38955;
DT 23-NOV-1993 (first entry)
DE LD78 Phe28>Ala.
KW SCI; stem cell inhibition; LD78; ACT2; MIP-lalpa;
KW macrophage inflammatory protein; multimer; tumour therapy;
KW psoriasis; hyperproliferation.
OS Homo sapiens.
PN WO9313206-A.
PR 23-DEC-1992; G02390.
PR 23-DEC-1991; GB-027319.
PR 14-OCT-1992; GB-021587.
PA (BRBI-) BRITISH BIO-TECHNOLOGY LTD.
PI Craig S, Czaplowski LG, Edwards RM, Gilbert RJ;
PI Hunter MG;
DR WPI; 93-227322/28.
PT Protein with stem cell inhibition activity, e.g. LD78 or MIP-1
PT alpha - unable to form stable multimer higher than dodecamer,
PT providing better tissue penetration
PS Example 30; Page 61; 294pp; English.
CC Analogues of natural stem cell inhibitors, such as LD78 and MIP-
CC lalpa, having mutations to prevent or reduce multimer formation
CC beyond certain stages (e.g. dodecamer), have improved solution
CC properties leading to enhanced productivity and greater therapeutic
CC utility as stem cell protective agents. The analogues may be used
CC in tumour therapy, psoriasis or other diseases involving hyper-
CC proliferative stem cells.
CC Most pref. LD78 analogues are Phel2>Gln, Lys44>Ser, Arg17>Glu (with
CC Gln18>Glu) and, esp., Asp26>Ala and Glu66>Ser. Pref. MIP-lalpa
CC analogues correspond to the pref. LD78 analogues.
SQ Sequence 69 AA;

Query Match 100.0%; Score 93; DB 7; Length 69;
Best Local Similarity 100.0%; Pred. No. 5.88e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 qvcadpseewvq 59
| | | | | | | | | |
QY 1 QVCADPSEEWVQ 12

RESULT 7
ID R38955 standard; Protein; 69 AA.
AC R38955;
DT 23-NOV-1993 (first entry)
DE LD78 Phe28>Ala.
KW SCI; stem cell inhibition; LD78; ACT2; MIP-lalpa;
KW macrophage inflammatory protein; multimer; tumour therapy;
KW psoriasis; hyperproliferation.
OS Homo sapiens.
PN WO9313206-A.
PR 23-DEC-1992; G02390.
PR 23-DEC-1991; GB-027319.
PR 14-OCT-1992; GB-021587.
PA (BRBI-) BRITISH BIO-TECHNOLOGY LTD.
PI Craig S, Czaplowski LG, Edwards RM, Gilbert RJ;
PI Hunter MG;
DR WPI; 93-227322/28.
PT Protein with stem cell inhibition activity, e.g. LD78 or MIP-1
PT alpha - unable to form stable multimer higher than dodecamer,
PT providing better tissue penetration
PS Example 30; Page 61; 294pp; English.
CC Analogues of natural stem cell inhibitors, such as LD78 and MIP-
CC lalpa, having mutations to prevent or reduce multimer formation
CC beyond certain stages (e.g. dodecamer), have improved solution
CC properties leading to enhanced productivity and greater therapeutic
CC utility as stem cell protective agents. The analogues may be used
CC in tumour therapy, psoriasis or other diseases involving hyper-
CC proliferative stem cells.
CC Most pref. LD78 analogues are Phel2>Gln, Lys44>Ser, Arg17>Glu (with
CC Gln18>Glu) and, esp., Asp26>Ala and Glu66>Ser. Pref. MIP-lalpa
CC analogues correspond to the pref. LD78 analogues.
SQ Sequence 69 AA;

Query Match 100.0%; Score 93; DB 7; Length 69;
Best Local Similarity 100.0%; Pred. No. 5.88e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 qvcadpseewvq 59
| | | | | | | | | |
QY 1 QVCADPSEEWVQ 12

RESULT 7

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```

ID R38932 standard; Protein; 69 AA.
AC R38932;
DT 23-NOV-1993 (first entry)
DE LD78 Asp26>Ala.
KW SCI; stem cell inhibition; LD78; ACT2; MIP-lalpa;
KW macrophage inflammatory protein; multimer; tumour therapy;
KW psoriasis; hyperproliferation.
OS Homo sapiens.
PN WO9313206-A.
PR 08-JUL-1993; G02390.
PR 23-DEC-1992; GB-027319.
PR 14-OCT-1992; GB-021587.
PA (BRBI-) BRITISH BIO-TECHNOLOGY LTD.
PI Craig S, Czaplowski LG, Edwards RM, Gilbert RJ;
PI Hunter MG;
DR WPI; 93-227322/28.
PT Protein with stem cell inhibition activity, e.g. LD78 or MIP-1
PT alpha - unable to form stable multimer higher than dodecamer,
PT providing better tissue penetration
PS Example 7; Page 52; 294pp; English.
CC Analogues of natural stem cell inhibitors, such as LD78 and MIP-
CC lalpa, having mutations to prevent or reduce multimer formation
CC beyond certain stages (e.g. dodecamer), have improved solution
CC properties leading to enhanced productivity and greater therapeutic
CC utility as stem cell protective agents. The analogues may be used
CC in tumour therapy, psoriasis or other diseases involving hyper-
CC proliferative stem cells.
CC Most pref. LD78 analogues are Phel2>Gln, Lys44>Ser, Arg17>Glu (with
CC Gln18>Glu) and, esp., Asp26>Ala and Glu66>Ser. Pref. MIP-lalpa
CC analogues correspond to the pref. LD78 analogues.
SQ Sequence 69 AA;

Query Match 100.0%; Score 93; DB 7; Length 69;
Best Local Similarity 100.0%; Pred. No. 5.88e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 qvcadpseewvq 59
| | | | | | | | | |
QY 1 QVCADPSEEWVQ 12

RESULT 8
ID R38931 standard; Protein; 69 AA.
AC R38931;
DT 23-NOV-1993 (first entry)
DE LD78 Phe23>Asn, Ile24>Thr.
KW SCI; stem cell inhibition; LD78; ACT2; MIP-lalpa;
KW macrophage inflammatory protein; multimer; tumour therapy;
KW psoriasis; hyperproliferation.
OS Homo sapiens.
PN WO9313206-A.
PR 08-JUL-1993; G02390.
PR 23-DEC-1992; GB-027319.
PR 14-OCT-1992; GB-021587.
PA (BRBI-) BRITISH BIO-TECHNOLOGY LTD.
PI Craig S, Czaplowski LG, Edwards RM, Gilbert RJ;
PI Hunter MG;
DR WPI; 93-227322/28.
PT Protein with stem cell inhibition activity, e.g. LD78 or MIP-1
PT alpha - unable to form stable multimer higher than dodecamer,
PT providing better tissue penetration
PS Example 6; Page 52; 294pp; English.
CC Analogues of natural stem cell inhibitors, such as LD78 and MIP-
CC lalpa, having mutations to prevent or reduce multimer formation
CC beyond certain stages (e.g. dodecamer), have improved solution
CC properties leading to enhanced productivity and greater therapeutic
CC utility as stem cell protective agents. The analogues may be used
CC in tumour therapy, psoriasis or other diseases involving hyper-
CC proliferative stem cells.
CC Most pref. LD78 analogues are Phel2>Gln, Lys44>Ser, Arg17>Glu (with
CC Gln18>Glu) and, esp., Asp26>Ala and Glu66>Ser. Pref. MIP-lalpa
CC analogues correspond to the pref. LD78 analogues.
SQ Sequence 69 AA;

Query Match 100.0%; Score 93; DB 7; Length 69;
Best Local Similarity 100.0%; Pred. No. 5.88e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 qvcadpseewvq 59
| | | | | | | | | |
QY 1 QVCADPSEEWVQ 12

RESULT 8
ID R38931 standard; Protein; 69 AA.
AC R38931;
DT 23-NOV-1993 (first entry)
DE LD78 Phe23>Asn, Ile24>Thr.
KW SCI; stem cell inhibition; LD78; ACT2; MIP-lalpa;
KW macrophage inflammatory protein; multimer; tumour therapy;
KW psoriasis; hyperproliferation.
OS Homo sapiens.
PN WO9313206-A.
PR 08-JUL-1993; G02390.
PR 23-DEC-1992; GB-027319.
PR 14-OCT-1992; GB-021587.
PA (BRBI-) BRITISH BIO-TECHNOLOGY LTD.
PI Craig S, Czaplowski LG, Edwards RM, Gilbert RJ;
PI Hunter MG;
DR WPI; 93-227322/28.
PT Protein with stem cell inhibition activity, e.g. LD78 or MIP-1
PT alpha - unable to form stable multimer higher than dodecamer,
PT providing better tissue penetration
PS Example 6; Page 52; 294pp; English.
CC Analogues of natural stem cell inhibitors, such as LD78 and MIP-
CC lalpa, having mutations to prevent or reduce multimer formation
CC beyond certain stages (e.g. dodecamer), have improved solution
CC properties leading to enhanced productivity and greater therapeutic
CC utility as stem cell protective agents. The analogues may be used
CC in tumour therapy, psoriasis or other diseases involving hyper-
CC proliferative stem cells.
CC Most pref. LD78 analogues are Phel2>Gln, Lys44>Ser, Arg17>Glu (with
CC Gln18>Glu) and, esp., Asp26>Ala and Glu66>Ser. Pref. MIP-lalpa
CC analogues correspond to the pref. LD78 analogues.
SQ Sequence 69 AA;

Query Match 100.0%; Score 93; DB 7; Length 69;
Best Local Similarity 100.0%; Pred. No. 5.88e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 qvcadpseewvq 59
| | | | | | | | | |
QY 1 QVCADPSEEWVQ 12

RESULT 8

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CC analogues correspond to the pref. LD78 analogues.
SQ Sequence 69 AA;

Query Match 100.0%; Score 93; DB 7; Length 69;
Best Local Similarity 100.0%; Pred. No. 5.88e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 qvcadpseewvq 59
QY 1 QVCADPSEEWVQ 12
| | | | | | | | | | | | | |

RESULT 9

ID R38930 standard; Protein; 69 AA.
AC R38930;
DT 23-NOV-1993 (first entry)
DE LD78 Arg17>Ser.
KW SCI; stem cell inhibition; LD78; ACT2; MIP-lalpa;
KW macrophage inflammatory protein; multimer; tumour therapy;
KW psoriasis; hyperproliferation.
OS Homo sapiens.
PN WO9313206-A.
PD 08-JUL-1993.
PF 23-DEC-1992; G02390.
PR 23-DEC-1991; GB-027319.
PR 14-OCT-1992; GB-021587.
PA (BRBI-) BRITISH BIO-TECHNOLOGY LTD.
PI Craig S., Czaplowski LG, Edwards RM, Gilbert RJ;
PI Hunter MG;
DR WPI; 93-227322/28.

PT Protein with stem cell inhibition activity, e.g. LD78 or MIP-1
PT alpha - unable to form stable multimer higher than dodecamer,
PT providing better tissue penetration
PS Example 5; Page 51; 294pp; English.
CC Analogues of natural stem cell inhibitors, such as LD78 and MIP-
CC 1alpha, having mutations to prevent or reduce multimer formation
CC beyond certain stages (e.g. dodecamer), have improved solution
CC properties leading to enhanced productivity and greater therapeutic
CC utility as stem cell protective agents. The analogues may be used
CC in tumour therapy, psoriasis or other diseases involving hyper-
CC proliferative stem cells.
CC Most pref. LD78 analogues are Phe12>Gln, Lys44>Ser, Arg17>Glu (with
CC Gln18>Glu) and, esp., Asp26>Ala and Glu66>Ser. Pref. MIP-lalpa
CC analogues correspond to the pref. LD78 analogues.
SQ Sequence 69 AA;

Query Match 100.0%; Score 93; DB 7; Length 69;
Best Local Similarity 100.0%; Pred. No. 5.88e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 qvcadpseewvq 59
QY 1 QVCADPSEEWVQ 12
| | | | | | | | | | | | | |

RESULT 10

ID R38937 standard; Protein; 69 AA.
AC R38937;
DT 23-NOV-1993 (first entry)
DE LD78 Lys60>Gln, Asp64>Asn.
KW SCI; stem cell inhibition; LD78; ACT2; MIP-lalpa;
KW macrophage inflammatory protein; multimer; tumour therapy;
KW psoriasis; hyperproliferation.
OS Homo sapiens.
PN WO9313206-A.
PD 08-JUL-1993.
PF 23-DEC-1992; G02390.
PR 23-DEC-1991; GB-027319.
PR 14-OCT-1992; GB-021587.
PA (BRBI-) BRITISH BIO-TECHNOLOGY LTD.
PI Craig S., Czaplowski LG, Edwards RM, Gilbert RJ;
PI Hunter MG;
DR WPI; 93-227322/28.

PT Protein with stem cell inhibition activity, e.g. LD78 or MIP-1
PT alpha - unable to form stable multimer higher than dodecamer,
PT providing better tissue penetration
PS Example 12; Page 54; 294pp; English.
CC Analogues of natural stem cell inhibitors, such as LD78 and MIP-
CC 1alpha, having mutations to prevent or reduce multimer formation
CC beyond certain stages (e.g. dodecamer), have improved solution
CC properties leading to enhanced productivity and greater therapeutic
CC utility as stem cell protective agents. The analogues may be used
CC in tumour therapy, psoriasis or other diseases involving hyper-
CC proliferative stem cells.
CC Most pref. LD78 analogues are Phe12>Gln, Lys44>Ser, Arg17>Glu (with
CC Gln18>Glu) and, esp., Asp26>Ala and Glu66>Ser. Pref. MIP-lalpa
CC analogues correspond to the pref. LD78 analogues.
SQ Sequence 69 AA;

Query Match 100.0%; Score 93; DB 7; Length 69;
Best Local Similarity 100.0%; Pred. No. 5.88e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 qvcadpseewvq 59
QY 1 QVCADPSEEWVQ 12
| | | | | | | | | | | | | |

RESULT 11

ID R38936 standard; Protein; 69 AA.
AC R38936;
DT 23-NOV-1993 (first entry)
DE LD78 Arg47>Glu.
KW SCI; stem cell inhibition; LD78; ACT2; MIP-lalpa;
KW macrophage inflammatory protein; multimer; tumour therapy;
KW psoriasis; hyperproliferation.
OS Homo sapiens.
PN WO9313206-A.
PD 08-JUL-1993.
PF 23-DEC-1992; G02390.
PR 23-DEC-1991; GB-027319.
PR 14-OCT-1992; GB-021587.
PA (BRBI-) BRITISH BIO-TECHNOLOGY LTD.
PI Craig S., Czaplowski LG, Edwards RM, Gilbert RJ;
PI Hunter MG;
DR WPI; 93-227322/28.

PT Protein with stem cell inhibition activity, e.g. LD78 or MIP-1
PT alpha - unable to form stable multimer higher than dodecamer,
PT providing better tissue penetration
PS Example 11; Page 53; 294pp; English.
CC Analogues of natural stem cell inhibitors, such as LD78 and MIP-
CC 1alpha, having mutations to prevent or reduce multimer formation
CC beyond certain stages (e.g. dodecamer), have improved solution
CC properties leading to enhanced productivity and greater therapeutic
CC utility as stem cell protective agents. The analogues may be used
CC in tumour therapy, psoriasis or other diseases involving hyper-
CC proliferative stem cells.
CC Most pref. LD78 analogues are Phe12>Gln, Lys44>Ser, Arg17>Glu (with
CC Gln18>Glu) and, esp., Asp26>Ala and Glu66>Ser. Pref. MIP-lalpa
CC analogues correspond to the pref. LD78 analogues.
SQ Sequence 69 AA;

Query Match 100.0%; Score 93; DB 7; Length 69;
Best Local Similarity 100.0%; Pred. No. 5.88e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 qvcadpseewvq 59
QY 1 QVCADPSEEWVQ 12
| | | | | | | | | | | | | |

RESULT 12

ID R38954 standard; Protein; 69 AA.
AC R38954;
DT 23-NOV-1993 (first entry)
DE LD78 Phe12>Ala.

KW SCI; stem cell inhibition; LD78; ACT2; MIP-lalpa;
 KW macrophage inflammatory protein; multimer; tumour therapy;
 KW psoriasis; hyperproliferation.
 OS Homo sapiens.
 PN WO9313206-A.
 PD 08-JUL-1993.
 PF 23-DEC-1992; G02390.
 PR 23-DEC-1991; GB-027319.
 PR 14-OCT-1992; GB-021587.
 PA (BRBI-) BRITISH BIO-TECHNOLOGY LTD.
 PI Craig S, Czaplowski LG, Edwards RM, Gilbert RJ;
 PI Hunter MG;

DR WPI; 93-227322/28.
 DR Protein with stem cell inhibition activity, e.g. LD78 or MIP-1
 PT alpha - unable to form stable multimer higher than dodecamer,
 PT providing better tissue penetration
 PS Example 29; Page 60; 294pp; English.
 CC Analogues of natural stem cell inhibitors, such as LD78 and MIP-
 CC lalpa, having mutations to prevent or reduce multimer formation
 CC beyond certain stages (e.g. dodecamer), have improved solution
 CC properties leading to enhanced productivity and greater therapeutic
 CC utility as stem cell protective agents. The analogues may be used
 CC in tumour therapy, psoriasis or other diseases involving hyper-
 CC proliferative stem cells.
 CC Most pref. LD78 analogues are Phe12>Gln, Lys44>Ser, Arg17>Glu (with
 CC Gln18>Glu) and, esp., Asp26>Ala and Glu66>Ser. Pref. MIP-lalpa
 CC analogues correspond to the pref. LD78 analogues.
 SQ Sequence 69 AA;

Query Match 100.0%; Score 93; DB 7; Length 69;
 Best Local Similarity 100.0%; Pred. No. 5.88e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 qvcadpseewvq 59
 | | | | | | | | | |
 QY 1 QVCADPSEEWVQ 12

RESULT 13
 ID R38929 standard; Protein; 69 AA.

AC R38929;
 DT 23-NOV-1993 (first entry)
 DE LD78 Phe28>Ser.
 KW SCI; stem cell inhibition; LD78; ACT2; MIP-lalpa;
 KW macrophage inflammatory protein; multimer; tumour therapy;
 KW psoriasis; hyperproliferation.
 OS Homo sapiens.
 PN WO9313206-A.
 PD 08-JUL-1993.
 PF 23-DEC-1992; G02390.
 PR 23-DEC-1991; GB-027319.
 PR 14-OCT-1992; GB-021587.
 PA (BRBI-) BRITISH BIO-TECHNOLOGY LTD.
 PI Craig S, Czaplowski LG, Edwards RM, Gilbert RJ;
 PI Hunter MG;

DR WPI; 93-227322/28.
 DR Protein with stem cell inhibition activity, e.g. LD78 or MIP-1
 PT alpha - unable to form stable multimer higher than dodecamer,
 PT providing better tissue penetration
 PS Example 4; Page 51; 294pp; English.
 CC Analogues of natural stem cell inhibitors, such as LD78 and MIP-
 CC lalpa, having mutations to prevent or reduce multimer formation
 CC beyond certain stages (e.g. dodecamer), have improved solution
 CC properties leading to enhanced productivity and greater therapeutic
 CC utility as stem cell protective agents. The analogues may be used
 CC in tumour therapy, psoriasis or other diseases involving hyper-
 CC proliferative stem cells.
 CC Most pref. LD78 analogues are Phe12>Gln, Lys44>Ser, Arg17>Glu (with
 CC Gln18>Glu) and, esp., Asp26>Ala and Glu66>Ser. Pref. MIP-lalpa
 CC analogues correspond to the pref. LD78 analogues.
 SQ Sequence 69 AA;

Query Match 100.0%; Score 93; DB 7; Length 69;

Best Local Similarity 100.0%; Pred. No. 5.88e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 qvcadpseewvq 59
 | | | | | | | | | |
 QY 1 QVCADPSEEWVQ 12

RESULT 14
 ID R38943 standard; Protein; 69 AA.

AC R38943;
 DT 23-NOV-1993 (first entry)
 DE LD78 Glu29>Arg.
 KW SCI; stem cell inhibition; LD78; ACT2; MIP-lalpa;
 KW macrophage inflammatory protein; multimer; tumour therapy;
 KW psoriasis; hyperproliferation.
 OS Homo sapiens.
 PN WO9313206-A.
 PD 08-JUL-1993.
 PF 23-DEC-1992; G02390.
 PR 23-DEC-1991; GB-027319.
 PR 14-OCT-1992; GB-021587.
 PA (BRBI-) BRITISH BIO-TECHNOLOGY LTD.
 PI Craig S, Czaplowski LG, Edwards RM, Gilbert RJ;
 PI Hunter MG;

DR WPI; 93-227322/28.
 DR Protein with stem cell inhibition activity, e.g. LD78 or MIP-1
 PT alpha - unable to form stable multimer higher than dodecamer,
 PT providing better tissue penetration
 PS Example 18; Page 56; 294pp; English.
 CC Analogues of natural stem cell inhibitors, such as LD78 and MIP-
 CC lalpa, having mutations to prevent or reduce multimer formation
 CC beyond certain stages (e.g. dodecamer), have improved solution
 CC properties leading to enhanced productivity and greater therapeutic
 CC utility as stem cell protective agents. The analogues may be used
 CC in tumour therapy, psoriasis or other diseases involving hyper-
 CC proliferative stem cells.
 CC Most pref. LD78 analogues are Phe12>Gln, Lys44>Ser, Arg17>Glu (with
 CC Gln18>Glu) and, esp., Asp26>Ala and Glu66>Ser. Pref. MIP-lalpa
 CC analogues correspond to the pref. LD78 analogues.
 SQ Sequence 69 AA;

Query Match 100.0%; Score 93; DB 7; Length 69;
 Best Local Similarity 100.0%; Pred. No. 5.88e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 qvcadpseewvq 59
 | | | | | | | | | |
 QY 1 QVCADPSEEWVQ 12

RESULT 15
 ID R38944 standard; Protein; 69 AA.

AC R38944;
 DT 23-NOV-1993 (first entry)
 DE LD78 Glu18>Glu
 KW SCI; stem cell inhibition; LD78; ACT2; MIP-lalpa;
 KW macrophage inflammatory protein; multimer; tumour therapy;
 KW psoriasis; hyperproliferation.
 OS Homo sapiens.
 PN WO9313206-A.
 PD 08-JUL-1993.
 PF 23-DEC-1992; G02390.
 PR 23-DEC-1991; GB-027319.
 PR 14-OCT-1992; GB-021587.
 PA (BRBI-) BRITISH BIO-TECHNOLOGY LTD.
 PI Craig S, Czaplowski LG, Edwards RM, Gilbert RJ;
 PI Hunter MG;

DR WPI; 93-227322/28.
 DR Protein with stem cell inhibition activity, e.g. LD78 or MIP-1
 PT alpha - unable to form stable multimer higher than dodecamer,
 PT providing better tissue penetration
 PS Example 19; Page 56; 294pp; English.

CC Analogues of natural stem cell inhibitors, such as LD78 and MIP-
 CC lalpa, having mutations to prevent or reduce multimer formation
 CC beyond certain stages (e.g. dodecamer), have improved solution
 CC properties leading to enhanced productivity and greater therapeutic
 CC utility as stem cell protective agents. The analogues may be used
 CC in tumour therapy, psoriasis or other diseases involving hyper-
 CC proliferative stem cells.
 CC Most pref. LD78 analogues are Phe12>Gln, Lys44>Ser, Arg17>Glu (with
 CC Gln18>Glu) and, esp., Asp26>Ala and Glu66>Ser. Pref. MIP-lalpa
 CC analogues correspond to the pref. LD78 analogues.
 SQ Sequence 69 AA;

Query Match 100.0%; Score 93; DB 7; Length 69;
 Best Local Similarity 100.0%; Pred. No. 5.88e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 qvcadpseewvq 59
 QY 1 QVCADPSEEWVQ 12

Search completed: Fri Feb 4 17:20:57 2000
 Job time : 19 secs.

RC TISSUE-T-CELL;
 RX MEDLINE; 89325421.
 RA CHANG H.C., REINHERZ E.L.;
 RT "isolation and characterization of a cDNA encoding a putative
 cytokine which is induced by stimulation via the CD2 structure on
 human T lymphocytes.";
 RL EUR. J. IMMUNOL. 19:1045-1051(1989).
 RN [6]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 91373378.
 RA NAPOLITANO M., MODI W.S., CEVARIO S.J., GNARRA J.R., SEVANEZ H.N.,
 RA LEONARD W.J.;
 RT "The gene encoding the Act-2 cytokine. Genomic structure, HTLV-I/Tax
 responsiveness of 5' upstream sequences, and chromosomal
 localization.";
 RL J. BIOL. CHEM. 266:17531-17536(1991).
 RN [7]
 RP SEQUENCE OF 6-92 FROM N.A.
 RX MEDLINE; 90038522.
 RA MILLER M.D., HATA S., WAAL MALEYT R., KRANGEL M.S.;
 RT "A novel polypeptide secreted by activated human T lymphocytes.";
 RL J. IMMUNOL. 143:2907-2916(1989).
 RN [8]
 RP STRUCTURE BY NMR.
 RX MEDLINE; 94182137.
 RA LODI P.J., GARRETT D.S., KUSCEWSKI J., TSANG M.L.S., WEATHERBEE J.A.,
 RA LEONARD W.J., GROENENBORN A.M., CLORE G.M.;
 RT "High-resolution solution structure of the beta chemokine hMIP-1 beta
 by multidimensional NMR.";
 RL SCIENCE 263:1762-1767(1994).
 CC -!- FUNCTION: MONOKINE WITH INFLAMMATORY AND CHEMOKINETIC PROPERTIES.
 CC -!- SUBUNIT: HOMODIMER.
 CC -!- INDUCTION: BY MITOGENS.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 C-C) (CHEMOKINE CC).
 CC -----
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 or send an email to license@isb-sib.ch).
 CC -----
 DR EMBL; M23502; G533213; -.
 DR EMBL; M25316; G602455; -.
 DR EMBL; J04130; G178018; -.
 DR EMBL; X53683; G34218; -.
 DR EMBL; X53682; G35870; ALT_SEQ.
 DR EMBL; X16166; G32036; -.
 DR EMBL; M69203; G1332376; -.
 DR EMBL; M69201; G1332376; JOINED.
 DR EMBL; M69202; G1332376; JOINED.
 DR EMBL; M57503; G339727; -.
 DR PIR; A31767; A31767; -.
 DR PIR; B30574; B30574; -.
 DR PIR; D30552; D30552; -.
 DR PIR; JH0319; JH0319; -.
 DR PIR; A37411; A37411; -.
 DR PDB; 1HUM; 30-APR-94.
 DR PDB; 1HUN; 30-APR-94.
 DR MIN; 182284; -.
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL; 3D-STRUCTURE.
 FT SIGNAL 1 23
 FT CHAIN 24 92 MACROPHAGE INFLAMMATORY PROTEIN 1-BETA.
 FT DISULFID 34 58 BY SIMILARITY.
 FT DISULFID 35 74 BY SIMILARITY.
 FT CONFLICT 15 16 T -> C (IN REF. 7).
 FT CONFLICT 15 15 A -> S (IN REF. 6).
 FT CONFLICT 20 20 P -> L (IN REF. 2).
 FT CONFLICT 40 45 ARKLPR -> REASS (IN REF. 3).

FT CONFLICT 56 56 S -> I (IN REF. 7).
 FT CONFLICT 70 70 S -> G (IN REF. 6).
 FT CONFLICT 80 80 S -> T (IN REF. 7).
 FT STRAND 29 29
 FT STRAND 33 33
 FT HELIX 45 47
 FT STRAND 50 53
 FT STRAND 63 66
 FT STRAND 72 75
 FT TURN 77 78
 FT HELIX 80 90
 SQ SEQUENCE 92 AA; 10212 MW; F18E7AFD CRC32;
 Query Match 100.0%; Score 91; DB 1; Length 92;
 Best Local Similarity 100.0%; Pred. No. 2.87e-08;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Db 72 QVCADPSESWMQ 83
 QY 1 QVCADPSESWMQ 12
 |||||
 RESULT 2
 ID MILB_RABBIT STANDARD; PRT; 92 AA.
 AC P46632;
 DT 01-NOV-1995 (REL. 32, CREATED)
 DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
 DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
 DE MACROPHAGE INFLAMMATORY PROTEIN 1-BETA PRECURSOR (MIP-1-BETA) (IMMUNE
 DE ACTIVATION PROTEIN 2) (ACT-2).
 GN SCYAA.
 OS ORYCTOLAGUS CUNICULUS (RABBIT).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC LAGOMORPHA; LEPORIDAE; ORYCTOLAGUS.
 RN [1]
 RC SEQUENCE FROM N.A.
 RC STRAIN-NEW ZEALAND WHITE;
 RX MEDLINE; 94198229.
 RA MORI S., GOTO K., GOTO F., MUTAKAMI K., OHKAWARA S., YOSHINAGA M.;
 RT "Dynamic changes in mRNA expression of neutrophils during the course
 of acute inflammation in rabbits.";
 RL INT. IMMUNOL. 6:149-156(1994).
 CC -!- FUNCTION: MONOKINE WITH INFLAMMATORY AND CHEMOKINETIC PROPERTIES
 CC (BY SIMILARITY).
 CC -!- SUBUNIT: HOMODIMER (BY SIMILARITY).
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 C-C) (CHEMOKINE CC).
 CC -----
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 or send an email to license@isb-sib.ch).
 CC -----
 DR EMBL; D17402; G599578; -.
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSSP; P13236; 1HUN.
 KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 FT SIGNAL 1 23
 FT CHAIN 24 92 MACROPHAGE INFLAMMATORY PROTEIN 1-BETA.
 FT DISULFID 34 58 BY SIMILARITY.
 FT DISULFID 35 74 BY SIMILARITY.
 SQ SEQUENCE 92 AA; 10066 MW; A629AB2D CRC32;
 Query Match 96.7%; Score 88; DB 1; Length 92;
 Best Local Similarity 91.7%; Pred. No. 1.53e-07;
 Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
 Db 72 QVCANPSESWMQ 83
 |||||

DR HSP: P13236; 1HUN.
KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
FT SIGNAL 1 22 POTENTIAL.
FT CHAIN 23 92 MACROPHAGE INFLAMMATORY PROTEIN 1-ALPHA.
FT DISULFID 33 57 BY SIMILARITY.
FT DISULFID 34 73 BY SIMILARITY.
SQ SEQUENCE 92 AA; 10085 MW; C24DD919 CRC32;
Query Match 94.5%; Score 86; DB 1; Length 92;
Best Local Similarity 91.7%; Pred. No. 4.59e-07;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Db 71 QVCADPSESQVQ 82
QY 1 QVCADPSESQVQ 12
|||||
RESULT 4
ID MI10_HUMAN STANDARD; PRT; 93 AA.
AC P16619;
DT 01-AUG-1990 (REL. 15, CREATED)
DT 01-AUG-1990 (REL. 15, LAST SEQUENCE UPDATE)
DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
DE TONSILLAR LYMPHOCYTE LD78 BETA PROTEIN PRECURSOR (GOS19-2 PROTEIN)
DE (PAT 464.2).
GN SCYA3L1 OR 464.2.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 90287702.
RA IRVING S.G., ZIPFEL P.F., BALKES J., MORTON C.C.,
BURD P.R., STEBENLIST U., KELLY K.;
"Two inflammatory mediator cytokine genes are closely linked and
variably amplified on chromosome 11q";
RL NUCLEIC ACIDS RES. 18:3261-3270(1990).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE; 91103879.
RA BLUM S., FORSDYKE R.E., FORSDYKE D.R.;
"Three human homologs of a murine gene encoding an inhibitor of stem
cell proliferation";
RL DNA CELL BIOL. 9:589-602(1990).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE; 90287155.
RA NAKAO M., NOMIYAMA H., SHIMADA K.;
"Structures of human genes coding for cytokine LD78 and their
expression";
RL MOL. CELL. BIOL. 10:3646-3658(1990).
CC -!- SIMILARITY: 464.1 AND 464.2 ARE VERY CLOSELY RELATED.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
C-C) (CHEMOKINE CC).
CC
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CC
CC EMBL; X52149; G296666;
DR EMBL; M24110; G182849;
DR EMBL; D90145; G219908;
DR PIR; B30908; B30908.
DR PIR; B30412; B30412.
DR PIR; B35673; B35673.
DR PIR; S10157; S10157.
DR MIM; 601395;
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR

QY 1 QVCADPSESQVQ 12
PRT; 92 AA.
RESULT 3
ID MI10_HUMAN STANDARD; PRT; 92 AA.
AC P10147;
DT 01-MAR-1989 (REL. 10, CREATED)
DT 01-MAR-1989 (REL. 10, LAST SEQUENCE UPDATE)
DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
DE MACROPHAGE INFLAMMATORY PROTEIN 1-ALPHA PRECURSOR (MIP-1-ALPHA)
DE (TONSILLAR LYMPHOCYTE LD78 ALPHA PROTEIN) (GOS19-1 PROTEIN) (SIS-BETA)
DE (PAT 464.1) (SMALL INDUCIBLE CYTOKINE A3).
GN SCYA3 OR MIP1A.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 86223879.
RA OBARU K., FUKUDA M., MAEDA S., SHIMADA K.;
"A cDNA clone used to study mRNA inducible in human tonsillar
lymphocytes by a tumor promoter";
RL J. BIOCHEM. 99:885-894(1986).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE; 89140347.
RA ZIPFEL P.F., BALKES J., IRVING S.G., KELLY K., STEBENLIST U.;
"Mitogenic activation of human T cells induces two closely related
genes which share structural similarities with a new family of
secreted factors";
RL J. IMMUNOL. 142:1582-1590(1989).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE; 91103879.
RA BLUM S., FORSDYKE R.E., FORSDYKE D.R.;
"Three human homologs of a murine gene encoding an inhibitor of stem
cell proliferation";
RL DNA CELL BIOL. 9:589-602(1990).
RN [4]
RP SEQUENCE FROM N.A.
RX MEDLINE; 90287155.
RA NAKAO M., NOMIYAMA H., SHIMADA K.;
"Structures of human genes coding for cytokine LD78 and their
expression";
RL MOL. CELL. BIOL. 10:3646-3658(1990).
CC -!- FUNCTION: MONOKINE WITH INFLAMMATORY AND CHEMOKINETIC PROPERTIES.
CC -!- INDUCTION: BY TPA OR PHA (TPA = 12-O-TETRADECANOYL PHORBOL-13
ACETATE (TUMOR PROMOTER); PHA = PHYTOHEMAGGLUTININ (T-CELL
MITOGEN)).
CC -!- SIMILARITY: LD78-ALPHA AND -BETA ARE VERY CLOSELY RELATED.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
C-C) (CHEMOKINE CC).
CC
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CC
CC EMBL; D00044; D1000469;
DR EMBL; M23452; G188559;
DR EMBL; M25315; G602453;
DR EMBL; X03754; G758089;
DR EMBL; X04018; G34297; ALT_SEQ.
DR EMBL; M23178; G182847;
DR EMBL; D90144; G219906;
DR PIR; A24198; A24198.
DR PIR; A30574; A30574.
DR MIM; 182283;
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; 118; 1.
DR

DR PFAM; PF00048; 118; 1.
DR HSP; P13236; 1HUN.
KW CYTOKINE; CHEMOTAXIS; SIGNAL.
FT SIGNAL 1 23
FT CHAIN 24 93 LD78 BETA / GOS19-2 / 464.2.
FT DISULFID 34 58 BY SIMILARITY.
FT FT 35 74 BY SIMILARITY.
SQ SEQUENCE 93 AA; 10161 MW; 21EDDB04 CRC32;

Query Match 94.5%; Score 86; DB 1; Length 93;
Best Local Similarity 91.7%; Pred. No. 4.59e-07;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 72 QVCADPSEWVQ 83
QY 1 QVCADPSEWVQ 12

RESULT 5
ID M11A_RAT STANDARD; PRT; 92 AA.
AC P50229;
DT 01-OCT-1996 (REL. 34, CREATED)
DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
DT 01-OCT-1996 (REL. 35, LAST ANNOTATION UPDATE)
DE MACROPHAGE INFLAMMATORY PROTEIN 1-ALPHA PRECURSOR (MIP-1-ALPHA).
GN SCYA3 OR MIP1A.
OS RATTUS NORVEGICUS (RAT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=CD-1; TISSUE=LUNG;
RX MEDLINE; 95298037.
RA SHI M.M., GODLESKI J.J., PAULASKIS J.D.;
RT "Molecular cloning and posttranscriptional regulation of macrophage
inflammatory protein-1 alpha in alveolar macrophages.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 211:289-295(1995).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=LONG EVANS; TISSUE=LUNG;
RX MEDLINE; 95238980.
RA SHANLEY T.P., SCHMAL H., FRIEDL H.P., JONES M.L., WARD P.A.;
RT "Role of macrophage inflammatory protein-1 alpha (MIP-1 alpha) in
acute lung injury in rats.";
RL J. IMMUNOL. 154:4793-4802(1995).
RN [3]
RP SEQUENCE OF 24-57.
RC STRAIN=WISTAR;
RX MEDLINE; 96183056.
RA NAKAGAWA H., SHIOTA S., TAKANO K., SHIBATA F., KATO H.;
RT "Cytokine-induced neutrophil chemoattractant (CINC)-2 alpha, a novel
member of rat GRO/CINC, is a predominant chemokine produced by
lipopolysaccharide-stimulated rat macrophages in culture.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 220:945-948(1996).
CC -1- FUNCTION: MONOKINE WITH INFLAMMATORY AND CHEMOKINETIC PROPERTIES.
CC HAS CHEMOTACTIC ACTIVITY FOR MONOCYTES, NEUTROPHILS, EOSINOPHILS,
CC BASOPHILS, AND LYMPHOCYTES. REQUIRED FOR LUNG TNF-ALPHA
CC PRODUCTION, NEUTROPHIL RECRUITMENT AND SUBSEQUENT LUNG INJURY AND
CC MAY FUNCTION AS AN AUTOCRINE MEDIATOR FOR THE MACROPHAGE
CC PRODUCTION OF TNF-ALPHA WHICH IN TURN UP-REGULATES VASCULAR
CC ADHESION MOLECULES REQUIRED FOR NEUTROPHIL INFILX. THIS PROTEIN
CC BINDS HEPARIN.
CC -1- INDUCTION: BY LIPOPOLYSACCHARIDE (LPS).
CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).

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CC EMBL; U22414; G790633; -.
DR EMBL; U06435; G459150; -.
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; 118; 1.
DR HSP; P13236; 1HUN.
KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL; HEPARIN-BINDING.
FT SIGNAL 1 23
FT CHAIN 24 92 MACROPHAGE INFLAMMATORY PROTEIN 1-ALPHA.
FT DISULFID 34 57 BY SIMILARITY.
FT DISULFID 35 73 BY SIMILARITY.
FT CONFLICT 6 6 A -> T (IN REF. 2).
FT CONFLICT 57 57 A -> W (IN REF. 2 AND 3).
SQ SEQUENCE 92 AA; 10335 MW; F48CF89F CRC32;

Query Match 90.1%; Score 82; DB 1; Length 92;
Best Local Similarity 75.0%; Pred. No. 4.04e-06;
Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 71 QICADPKETWVQ 82
QY 1 QVCADPSEWVQ 12

RESULT 6
ID M11B_RAT STANDARD; PRT; 92 AA.
AC P50230;
DT 01-OCT-1996 (REL. 34, CREATED)
DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
DE MACROPHAGE INFLAMMATORY PROTEIN 1-BETA PRECURSOR (MIP-1-BETA).
GN SCYA4 OR MIP1B.
OS RATTUS NORVEGICUS (RAT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=LONG EVANS; TISSUE=LUNG;
RA JONES M.L., SHANLEY T.P., SCHMAL H., FRIEDL H.P., WARD P.A.;
RL SUBMITTED (FEB-1994) TO EMBL/GENBANK/DDSI DATA BANKS.
CC -1- FUNCTION: MONOKINE WITH INFLAMMATORY AND CHEMOKINETIC PROPERTIES.
CC -1- SUBUNIT: HOMODIMER (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).

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DR EMBL; U06434; G459148; -.
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; 118; 1.
DR HSP; P13236; 1HUN.
KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
FT SIGNAL 1 23 BY SIMILARITY.
FT CHAIN 24 92 MACROPHAGE INFLAMMATORY PROTEIN 1-BETA.
FT DISULFID 34 58 BY SIMILARITY.
FT DISULFID 35 74 BY SIMILARITY.
SQ SEQUENCE 92 AA; 10234 MW; 3C82B006 CRC32;

Query Match 86.8%; Score 79; DB 1; Length 92;
Best Local Similarity 81.8%; Pred. No. 2.01e-05;
Matches 9; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 72 QICADPSEWVQ 82
QY 1 QVCADPSEWVQ 11

RA WOLPE S.D., MASIAZ F., COIT D., CERAMI A.;
RT "Resolution of the two components of macrophage inflammatory protein
RT 1, and cloning and characterization of one of those components,
RL macrophage inflammatory protein 1 beta";
RN J. EXP. MED. 168:2251-2259(1988).
RX SEQUENCE FROM N.A.
RY MEDLINE: 89093958.
RA BROWN K.D., ZURAWSKI S.M., MOSMANN T.R., ZURAWSKI G.;
RT "A family of small inducible proteins secreted by leukocytes are
RT members of a new superfamily that includes leukocyte and
RT fibroblast-derived inflammatory agents, growth factors, and
RT indicators of various activation processes";
RN J. IMMUNOL. 142:679-687(1989).
RX SEQUENCE FROM N.A.
RY MEDLINE: 89093958.
RA BROWN K.D., ZURAWSKI S.M., MOSMANN T.R., ZURAWSKI G.;
RT "A family of small inducible proteins secreted by leukocytes are
RT members of a new superfamily that includes leukocyte and
RT fibroblast-derived inflammatory agents, growth factors, and
RT indicators of various activation processes";
RN J. IMMUNOL. 142:679-687(1989).
RX SEQUENCE FROM N.A.
RY MEDLINE: 89093958.
RA STRAIN-DBA/2J; TISSUE=LIVER;
RC DAUBERSIES P., LEPRETRE F., BAILLEUL B., GROVE M., PRAGNELL I.,
RA PLUMB M.A.;
RL SUBMITTED (OCT-1991) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -1- FUNCTION: MONOKINE WITH INFLAMMATORY AND CHEMOKINETIC PROPERTIES.
CC -1- SUBUNIT: HOMODIMER (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC
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CC
CC EMBL; M23503; G533245; -
CC EMBL; M35590; G199697; -
CC EMBL; X62502; G53127; -
CC PIR; C30552; C30552;
CC PIR; J00088; J00088;
CC MGD; MGI:98261; SCYA4.
CC PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
CC PFAM; PF00048; i18; 1.
CC HSP; P13236; 1HUN.
CC CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
CC SIGNAL 1 23
CC CHAIN 24 92 MACROPHAGE INFLAMMATORY PROTEIN 1-BETA.
CC DISULFID 34 58 BY SIMILARITY.
CC DISULFID 35 74 BY SIMILARITY.
CC CONFLICT 75 75 A -> P (IN REF. 1).
CC CONFLICT 79 79 E -> Q (IN REF. 1).
CC CONFLICT 88 88 D -> H (IN REF. 1).
CC SEQUENCE 92 AA; 10168 MW; C543B91F CRC32;
SQ
Query Match 83.5%; Score 76; DB 1; Length 92;
Best Local Similarity 72.7%; Pred. No. 9.78e-05;
Matches 8; Conservative 3; Mismatches 0; Indels 0; Gaps 0;
Db 72 QICADPSEWV 82
QY 1 QVCA DPSEWV 11
RESULT 9
ID M1A_MOUSE STANDARD; PRT; 92 AA.
AC P10855; P14096;
DT 01-JUL-1989 (REL. 11, CREATED)
DT 01-APR-1990 (REL. 14, LAST SEQUENCE UPDATE)
DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
DE MACROPHAGE INFLAMMATORY PROTEIN 1-ALPHA PRECURSOR (MIP-1-ALPHA) (TY-5)
DE (SIS-ALPHA) (HEPARIN-BINDING CHEMOTAXIS PROTEIN) (L2G25B).
GN SCYA3 OR MIP1A
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; MUS.

RA "cdna cloning of guinea pig monocyte chemoattractant protein-1 and
RT expression of the recombinant protein";
RN J. IMMUNOL. 150:5025-5032(1993).
CC -1- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
CC NEUTROPHILS.
CC -1- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC
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CC
CC EMBL; L04985; G349821; -
CC PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
CC PFAM; PF00048; i18; 1.
CC HSP; P80098; INCV.
CC CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE; GLYCOPROTEIN.
CC SIGNAL 1 23
CC CHAIN 24 120 MONOCYTE CHEMOTACTIC PROTEIN 1.
CC MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
CC SIMILARITY).
CC DISULFID 33 57 BY SIMILARITY.
CC DISULFID 34 73 BY SIMILARITY.
CC CARBOHYD 97 97 POTENTIAL.
CC SEQUENCE 120 AA; 13741 MW; 22FAD257 CRC32;
SQ
Query Match 84.6%; Score 77; DB 1; Length 120;
Best Local Similarity 66.7%; Pred. No. 5.79e-05;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
Db 71 EVCADPTOKWVQ 82
QY 1 QVCA DPSEWVQ 12
RESULT 8
ID M1B_MOUSE STANDARD; PRT; 92 AA.
AC P14097;
DT 01-JAN-1990 (REL. 13, CREATED)
DT 01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MACROPHAGE INFLAMMATORY PROTEIN 1-BETA PRECURSOR (MIP-1-BETA) (H400
DE PROTEIN) (SIS-GAMMA) (ACT2).
GN SCYA4 OR MIP1B
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN
RX SEQUENCE FROM N.A.
RY MEDLINE: 89067830.
RA SHERRY B., TERAMP-OLSON P., GALLEGOS C., BAUER D., DAVATELIS G.,

[1] SEQUENCE FROM N.A.
 RP MEDLINE: 88258380.
 RA DAVATELIS G., TERAMP-OLSON P., WOLPE S.D., HERMSEN K., LUEDKE C.,
 RA GALLEGOS C., COIT D., MERRYWEATHER J., CERAMI A.;
 RT "Cloning and characterization of a cDNA for murine macrophage
 RT inflammatory protein (MIP), a novel monokine with inflammatory and
 RT chemokinetic properties.";
 RL J. EXP. MED. 167:1939-1944(1988).
 [2] REVISTIONS.
 RP DAVATELIS G., TERAMP-OLSON P., WOLPE S.D., HERMSEN K., LUEDKE C.,
 RA GALLEGOS C., COIT D., MERRYWEATHER J., CERAMI A.;
 RL J. EXP. MED. 170:2189-2189(1989).
 [3] SEQUENCE FROM N.A.
 RP MEDLINE: 89093958.
 RA BROWN K.D., ZURAWSKI S.M., MOSMANN T.R., ZURAWSKI G.;
 RT "A family of small inducible proteins secreted by leukocytes are
 RT members of a new superfamily that includes leukocytes and
 RT fibroblast-derived inflammatory agents, growth factors, and
 RT indicators of various activation processes.";
 RL J. IMMUNOL. 142:679-687(1989).
 [4] SEQUENCE FROM N.A.
 RP STRAIN-DBA/2J;
 RC MEDLINE: 91016858.
 RA GROVE M., LOWE S., GRAHAM G., PRAGNELL I., PLUMB M.;
 RT "Sequence of the murine haemopoietic stem cell inhibitor/macrophage
 RT inflammatory protein 1 alpha gene.";
 RL NUCLEIC ACIDS RES. 18:5561-5561(1990).
 [5] SEQUENCE FROM N.A.
 RP MEDLINE: 89184547.
 RA KWON B.S., WEISSMAN S.M.;
 RT "cDNA sequences of two inducible T-cell genes.";
 RL PROC. NATL. ACAD. SCI. U.S.A. 86:1963-1967(1989).
 [6] SEQUENCE FROM N.A.
 RP MEDLINE: 91237116.
 RA WIDMER U., YANG Z., VAN DEVENTER S., MANOGUE K.R., SHERRY B.,
 RA CERAMI A.;
 RT "Genomic structure of murine macrophage inflammatory protein-1 alpha
 RT and conservation of potential regulatory sequences with a human
 RT homolog, LD78.";
 RL J. IMMUNOL. 146:4031-4040(1991).
 [7] SEQUENCE FROM N.A.
 RP STRAIN-BALE/CJ, DBA/2J, NOD/LTJ, SJL/J, AND B10.S/J; TISSUE-SPLEEN;
 RA MA R.Z., TEUSCHER C.;
 RL SUBMITTED (MAY-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
 [8] SEQUENCE OF 24-42.
 RP MEDLINE: 88154745.
 RA WOLPE S.D., DAVATELIS G., SHERRY B., BEUTLER B., HESSE D.G.,
 RA NGUYEN H.T., MOLDRAWER L.L., NATHAN C.F., LOWRY S.F., CERAMI A.;
 RT "Macrophages secrete a novel heparin-binding protein with
 RT inflammatory and neutrophil chemokinetic properties.";
 RL J. EXP. MED. 167:570-581(1988).
 [9] FUNCTION: MONOKINE WITH INFLAMMATORY, PYROGENIC AND CHEMOKINETIC
 CC PROPERTIES. HAS A POTENT CHEMOTACTIC ACTIVITY FOR EOSINOPHILS.
 CC BINDING TO A HIGH-AFFINITY RECEPTOR ACTIVATES CALCIUM RELEASE IN
 CC NEUTROPHILS.
 CC -!- TISSUE SPECIFICITY: EXPRESSED IN LUNG, SPLEEN, AND PANCREAS.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).

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 CC -----
 DR EMBL: M23447; G533241; -
 DR EMBL: X12531; G53123; -
 DR EMBL: X53372; G297531; -
 DR EMBL: J04491; G201525; -
 DR EMBL: M73061; G199695; -
 DR EMBL: AF065939; G3158440; -
 DR EMBL: AF065940; G3158442; -
 DR EMBL: AF065941; G3158444; -
 DR EMBL: AF065942; G3158446; -
 DR PIR: A27596; A27596
 DR PIR: A30552; A30552.
 DR PIR: A32333; A32333.
 DR PIR: S04533; S04533.
 DR PIR: S11685; S11685.
 DR MGD: MGI:98260; SCYA3.
 DR PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM: PF00048; i18; 1.
 DR HSSP: P13236; IHUN.
 KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 FT SIGNAL 1 23
 FT CHAIN 24 92
 FT DISULFID 34 57
 FT DISULFID 35 73
 FT CONFLICT 22 22
 FT CONFLICT 62 62
 FT SEQUENCE 92 AA; 10345 MW; 53979E5E CRC32;
 Query Match 82.4%; Score 75; DB 1; Length 92;
 Best Local Similarity 66.7%; Pred. No. 1.65e-04;
 Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
 Db 71 QICADSKETWVQ 82
 QY 1 QVCADPESWVQ 12
 RESULT 10
 ID MCP4_HUMAN STANDARD; PRT; 98 AA.
 AC Q99616;
 DT 15-JUL-1998 (REL. 36, CREATED)
 DT 15-JUL-1998 (REL. 36, LAST SEQUENCE UPDATE)
 DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
 DE MONOCYTE CHEMOTACTIC PROTEIN 4 PRECURSOR (MCP-4) (MONOCYTE
 DE CHEMOATTRACTANT PROTEIN 4) (CK-BETA10) (NCC-1).
 GN SCYA13 OR MCP4 OR NCC1.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=HEART;
 RX MEDLINE: 97113354.
 RA GARCIA-ZEPEDA E.A., COMBADIERE C., ROTHENBERG M.E., SARAFI M.N.,
 RA LAVIGNE F., HAMID Q., MURPHY P.M., LUSTER A.D.;
 RT "Human monocyte chemoattractant protein (MCP)-4 is a novel CC
 RT chemokine with activities on monocytes, eosinophils, and basophils
 RT induced in allergic and nonallergic inflammation that signals through
 RT the CC chemokine receptors (CCR) 2 and -3.";
 RL J. IMMUNOL. 157:5613-5626(1996).
 [2] SEQUENCE FROM N.A., AND SEQUENCE OF 17-98.
 RP TISSUE=FFAT;
 RC MEDLINE: 96235049.
 RX GUGUCCIONI M., LOETSCHER P., FORSSMANN U., DEWALD B., LI H., LIMA S.H.,
 RA LI Y., KREIDER B., GAROTTA G., THELEN M., BAGGIOLINI M.;
 RT "Monocyte chemotactic protein 4 (MCP-4), a novel structural and
 RT functional analogue of MCP-3 and eotaxin.";
 RL J. EXP. MED. 183:2379-2384(1996).
 [3] SEQUENCE FROM N.A., AND SEQUENCE OF 22-33.
 RP

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RESULT 11
D MCP3_HUMAN STANDARD; PRT; 99 AA.
C P80098;
T 01-DEC-1992 (REL. 24, CREATED)
T 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
T 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
E MONOCYTE CHEMOTACTIC PROTEIN 3 PRECURSOR (MCP-3) (MONOCYTE
E CHEMOATTRACTANT PROTEIN 3) (NC28).
E SCYA7 OR MCP3.
S HOMO SAPIENS (HUMAN).
S EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
S PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
C [1]
SEQUENCE FROM N.A., AND SEQUENCE OF 31-67 AND 71-99.
MEDLINE; 93213290.
OPDENAKKER G., FITEN P., PROOST P., VAN DAMME J.;
"Human monocyte chemotactic protein-3 (MCP-3): molecular cloning of
the cDNA and comparison with other chemokines.";
BIOCHEM. BIOPHYS. RES. COMMUN. 191:535-542(1993).
C [2]
SEQUENCE FROM N.A.
MEDLINE; 94375065.
OPDENAKKER G., FITEN P., NYS G., FROYEN G., VAN ROY N., SPELEMAN P.,
LAUREYS G., VAN DAMME J.;
"The human MCP-3 gene (SCYA7): cloning, sequence analysis, and
assignment to the C-C chemokine gene cluster on chromosome
17q11.2-q12.";
GENOMICS 21:403-408(1994).
C [3]
SEQUENCE FROM N.A.
MEDLINE; 93305913.
MINTY A., CHALON P., GUILLEMOT J.C., KAGHAD M., LIAUZUN P.,
MAGAZIN M., MILOUX B., MINTY C., RAMOND P., VITA N., LUPKER J.,
SHIRE D., FERRARA P., CAPUT D.;
"Molecular cloning of the MCP-3 chemokine gene and regulation of its
expression.";
EUR. CYTOKINE NETW. 4:99-110(1993).
C [4]
SEQUENCE OF 30-99.
TISUE-OSTEOSARCOMA;
MEDLINE; 92308855.
VAN DAMME J., PROOST P., LENAERTS J.-P., OPDENAKKER G.;
"Structural and functional identification of two human, tumor-derived
monocyte chemotactic proteins (MCP-2 and MCP-3) belonging to the
chemokine family.";
J. EXP. MED. 176:59-65(1992).
C [5]
STRUCTURE BY NMR, AND SUBUNIT.
MEDLINE; 97053697.
KIM K.-S., RAVATHNAM K., CLARK-LEWIS I., SYKES B.D.;
"Structural characterization of a monomeric chemokine: monocyte
chemoattractant protein-3.";
FEBS LETT. 395:277-282(1996).
C [6]
STRUCTURE BY NMR.
MEDLINE; 97263733.
MEUNIER S., BERNASSAU J.-M., GUILLEMOT J.-C., FERRARA P., DARBON H.;
"Determination of the three-dimensional structure of CC chemokine
monocyte chemoattractant protein 3 by 1H two-dimensional NMR
spectroscopy.";
BIOCHEMISTRY 36:4412-4422(1997).
C [1]
FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES AND
EOSINOPHILS, BUT NOT NEUTROPHILS. AUGMENTS MONOCYTE ANTI-TUMOR
ACTIVITY. ALSO INDUCES THE RELEASE OF GELATINASE B. THIS PROTEIN
CAN BIND HEPARIN.
C [1]
SUBUNIT: MONOMER.
C [1]
PTM: O-GLYCOSYLATED.
C [1]
SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
G-C) (CHEMOKINE CC).
-----
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DR EMBL; X72308; G313708; ALT_INIT.
 DR EMBL; X72309; -; NOT_ANNOTATED_CDS.
 DR EMBL; X71087; G288399;
 DR EMBL; X71087; G288398; ALT_INIT.
 DR EMBL; X71087; G288397; ALT_INIT.
 DR PIR; JC1478; JC1478.
 DR PIR; S32222; S32222.
 DR PIR; A54678; A54678.
 DR PDB; 1NCV; 15-OCT-97.
 DR MIM; 158106; -.
 DR PFAM; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; il8; 1.
 KW CYTOKINE; CHEMOTAXIS; HEPARIN-BINDING; GLYCOPROTEIN; SIGNAL;
 KW INFLAMMATORY RESPONSE; 3D-STRUCTURE.
 FT SIGNAL 1 23
 FT CHAIN 24 99
 FT MOD_RES 24 24
 FT DISULFID 34 59
 FT DISULFID 35 75
 FT CARBOHYD 29 29
 FT CONFLICT 30 30
 FT CONFLICT 68 70
 FT MISSING (IN REF. 4).
 FT SEQUENCE 99 AA; 11200 MW; 7502E19C CRC32;

Query Match 82.4%; Score 75; DB 1; Length 99;
 Best Local Similarity 58.3%; Pred.No. 1.65e-04;
 Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;
 Db 73 ETCADPTQKWQ 84
 QY 1 QVCADPSESQWQ 12

RESULT 12
 ID MIP4_HUMAN STANDARD; PRT; 89 AA.
 AC P55774;
 DT 01-NOV-1997 (REL. 35, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DE MACROPHAGE INFLAMMATORY PROTEIN 4 (MIP-4) (PULMONARY AND
 DE ACTIVATION-REGULATED CHEMOKINE) (CC CHEMOKINE PARC) (ALTERNATIVE
 DE ACTIVATED MACROPHAGE ASSOCIATED CC CHEMOKINE 1) (AMAC-1).
 GN SCVA18 OR MIP4.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
 [1]
 RA LI H., RUBEN S.;
 RA SEQUENCE FROM N.A.
 RA "Macrophage inflammatory protein-3 and -4";
 RA PATENT NUMBER US5504003, 02-APR-1996.
 [2]
 RA SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
 RA TISSUE-AORTA, AND LUNG;
 RA MEDLINE: 97376836.
 RA HIESHIMA K., IMAI T., BABA M., SHOUJAI K., ISHIZUKA K.,
 RA NAKAGAWA T., TSURUTA J., TAKEYA M., SAKAKI Y., TAKATSUKI K.,
 RA MIURA R., ODENAKKE G., VAN DAMME J., YOSHIE O., NOMIYAMA H.;
 RA "A novel human CC chemokine PARC that is most homologous to
 RA macrophage-inflammatory protein-1 alpha/LD78 alpha and chemotactic
 RA for T lymphocytes, but not for monocytes.";
 RA J. IMMUNOL. 159:1140-1149(1997).
 [3]
 RA SEQUENCE FROM N.A.
 RA KODELJA V., MUELLER C., POLITZ O., HAKTY N., ORFANOS C.E., GOERDT S.;
 RA SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [4]
 RP DISCUSSION OF SEQUENCE.
 RX MEDLINE: 97275308.
 RA WELLS T.N.C., PEITSCH M.C.;
 RT "The chemokine information source: identification and
 RT characterization of novel chemokines using the Worldwideweb and
 RT expressed sequence tag databases.";
 RL J. LEUKOC. BIOL. 61:545-550(1997).
 CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS LYMPHOCYTES BUT NOT
 CC MONOCYTES OR GRANULOCYTES. MAY BE INVOLVED IN B CELL MIGRATION
 CC INTO B CELL FOLLICLES IN LYMPH NODES.
 CC -!- TISSUE SPECIFICITY: EXPRESSED AT HIGH LEVELS IN THE LUNG. A LOWER
 CC LEVEL EXPRESSION IS SEEN IN LYMPHOID TISSUES SUCH AS LYMPH NODES,
 CC THYMUS AND APPENDIX.
 CC -!- INDUCTION: BY LIPOPOLYSACCHARIDE (LPS).
 CC -!- SIMILARITY: BELONGS TO THE INTERCINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC -----
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DR EMBL; AB000221; D1022520; -.
 DR EMBL; X13710; E321838; -.
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; il8; 1.
 DR HSSP; P13236; LHUN.
 KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 FT SIGNAL 1 20
 FT CHAIN 21 89
 FT DISULFID 30 54
 FT DISULFID 31 70
 FT SEQUENCE 89 AA; 9849 MW; 052AA3DC CRC32;

Query Match 81.3%; Score 74; DB 1; Length 89;
 Best Local Similarity 66.7%; Pred.No. 2.76e-04;
 Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;
 Db 68 QICADPNKKWQ 79
 QY 1 QVCADPSESQWQ 12

RESULT 13
 ID CCL1_HUMAN STANDARD; PRT; 93 AA.
 AC Q16627;
 DT 01-NOV-1997 (REL. 35, CREATED)
 DT 01-NOV-1997 (REL. 35, LAST SEQUENCE UPDATE)
 DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
 DE CHEMOKINE CC-1 PRECURSOR (HCC-1) (NCC-2).
 GN SCVA14 OR NCC2.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
 [1]
 RA SEQUENCE FROM N.A., AND SEQUENCE OF 20-93.
 RA TISSUE=BONE MARROW;
 RA MEDLINE: 96136773.
 RA SCHULZ-KNAPPE P., MAERGERT H.-J., DEWALD B., MEYER M., CETIN Y.,
 RA KOBLES M., TOMECKOWSKI J., KIRCHHOFF K., RAIDA M., ADERWANN K.,
 RA KIST A., REINECKE M., SILLARD R., PARDIGOL A., UGUCCIONI M.,
 RA BAGGIOLINI M., FORSSMANN W.-G.;
 RA "HCC-1, a novel chemokine from human plasma.";
 RA J. EXP. MED. 183:295-299(1996).
 [2]
 RA SEQUENCE FROM N.A.
 RA TISSUE=LIVER;
 RA PARDIGOL A., MAERGERT H.-J., ZUCHT H.D., FORSSMANN W.-G.,
 RA SCHULZ-KNAPPE P.;

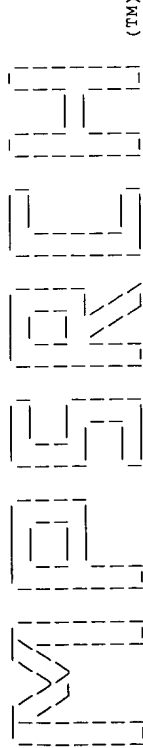
RN SUBMITTED (MAY-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 RL [3]
 RP SEQUENCE FROM N.A.
 RC TISSUE-PLACENTA;
 RA PARDIGOL A., MAEGERT H.-J., CIESLAK A., HILL O., SCHULZ-KNAPPE P.,
 RA FORSMANN W.-G.;
 RL SUBMITTED (OCT-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
 CC -!- FUNCTION: HAS WEAK ACTIVITIES ON HUMAN MONOCYTES AND ACTS VIA
 CC RECEPTORS THAT ALSO RECOGNIZE MIP-1 ALPHA. IT INDUCED
 CC INTRACELLULAR CA2+ CHANGES AND ENZYME RELEASE, BUT NO CHEMOTAXIS,
 CC AT CONCENTRATIONS OF 100-1,000 NM, AND WAS INACTIVE ON T
 CC LYMPHOCYTES, NEUTROPHILS, AND EOSINOPHIL LEUKOCYTES. ENHANCES THE
 CC PROLIFERATION OF CD34 MELOID PROGENITOR CELLS.
 CC -!- TISSUE SPECIFICITY: EXPRESSED CONSTITUTIVELY IN SEVERAL NORMAL
 CC TISSUES: SPLEEN, LIVER, SKELETAL AND HEART MUSCLE, GUT, AND BONE
 CC MARROW. PRESENT AT HIGH CONCENTRATIONS (1-80 NM) IN PLASMA.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC
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 CC
 CC EMBL: Z49270; G1004269; -
 CC EMBL: Z70292; E233856; -
 CC EMBL: Z49269; G1004267; -
 CC MM: 601392; -
 CC PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
 CC PFAM: PF00048; 118; 1.
 CC HSP: P13236; IHUN.
 CC CYTOKINE: SIGNAL.
 CC SIGNAL 1 19
 CC CHAIN 20 93
 CC DISULFID 35 59
 CC DISULFID 36 75
 CC SEQUENCE 93 AA; 10678 MW; A3E7BCAD CRC32;
 Query Match 80.2%; Score 73; DB 1; Length 93;
 Best Local Similarity 63.6%; Pred. No. 4.63e-04;
 Matches 7; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
 Db 74 VCTNPSDKWQV 84
 QY 2 VCADPSESQVQ 12
 RESULT 14
 ID MCP2_PIG STANDARD: PRT; 99 AA.
 AC P49873;
 DT 01-OCT-1996 (REL. 34, CREATED)
 DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DE MONOCYTE CHEMOTACTIC PROTEIN 2 PRECURSOR (MCP-2) (MONOCYTE
 DE CHEMOATTRACTANT PROTEIN 2).
 GN SCYA8 OR MCP2.
 OS SUS SCROFA (PIG).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC ARTIODACTYLA; SUIFORMES; SUINA; SUIDAE; SUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 95091716.
 RA HOSANG K.K., KNOKE I.I., KLAUDINY J.J., WEMPE F.F., WUTTKE W.W.,
 RA SCHEIT K.K.;
 RT "Porcine luteal cells express monocyte chemoattractant protein-2
 RT (MCP-2): analysis by cDNA cloning and northern analysis."
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 205:148-153(1994).
 CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES. THIS PROTEIN
 CC CAN BIND HEPARIN.
 CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
 CC
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC
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 CC
 CC EMBL: Z49270; G1004269; -
 CC EMBL: Z70292; E233856; -
 CC EMBL: Z49269; G1004267; -
 CC MM: 601392; -
 CC PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
 CC PFAM: PF00048; 118; 1.
 CC HSP: P13236; IHUN.
 CC CYTOKINE: SIGNAL.
 CC SIGNAL 1 19
 CC CHAIN 20 93
 CC DISULFID 35 59
 CC DISULFID 36 75
 CC SEQUENCE 93 AA; 10678 MW; A3E7BCAD CRC32;
 Query Match 80.2%; Score 73; DB 1; Length 93;
 Best Local Similarity 63.6%; Pred. No. 4.63e-04;
 Matches 7; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
 Db 74 VCTNPSDKWQV 84
 QY 2 VCADPSESQVQ 12
 RESULT 14
 ID MCP2_PIG STANDARD: PRT; 99 AA.
 AC P49873;
 DT 01-OCT-1996 (REL. 34, CREATED)
 DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DE MONOCYTE CHEMOTACTIC PROTEIN 2 PRECURSOR (MCP-2) (MONOCYTE
 DE CHEMOATTRACTANT PROTEIN 2).
 GN SCYA8 OR MCP2.
 OS SUS SCROFA (PIG).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC ARTIODACTYLA; SUIFORMES; SUINA; SUIDAE; SUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 95091716.
 RA HOSANG K.K., KNOKE I.I., KLAUDINY J.J., WEMPE F.F., WUTTKE W.W.,
 RA SCHEIT K.K.;
 RT "Porcine luteal cells express monocyte chemoattractant protein-2
 RT (MCP-2): analysis by cDNA cloning and northern analysis."
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 205:148-153(1994).
 CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES. THIS PROTEIN
 CC CAN BIND HEPARIN.
 CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
 CC
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
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 CC
 CC EMBL: Z49270; G1004269; -
 CC EMBL: Z70292; E233856; -
 CC EMBL: Z49269; G1004267; -
 CC MM: 601392; -
 CC PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
 CC PFAM: PF00048; 118; 1.
 CC HSP: P13236; IHUN.
 CC CYTOKINE: SIGNAL.
 CC SIGNAL 1 19
 CC CHAIN 20 93
 CC DISULFID 35 59
 CC DISULFID 36 75
 CC SEQUENCE 93 AA; 10678 MW; A3E7BCAD CRC32;
 Query Match 80.2%; Score 73; DB 1; Length 99;
 Best Local Similarity 66.7%; Pred. No. 4.63e-04;
 Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;
 Db 73 EVCADPQKQWQV 84
 QY 1 QVCADPSESQVQ 12
 RESULT 15
 ID CCC3_HUMAN STANDARD: PRT; 109 AA.
 AC Q13954;
 DT 01-NOV-1997 (REL. 35, CREATED)
 DT 01-NOV-1997 (REL. 35, LAST SEQUENCE UPDATE)
 DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
 DE CHEMOKINE CC-3 PRECURSOR (HCC-3).
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE-LIVER;
 RA PARDIGOL A., MAEGERT H.-J., ZUCHT H.D., FORSMANN W.-G.,
 RA SCHULZ-KNAPPE P.;
 RL SUBMITTED (MAY-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
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 CC
 CC EMBL: Z70293; E233858; -
 CC PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
 CC PFAM: PF00048; 118; 1.
 CC HSP: P13236; IHUN.
 CC CYTOKINE: SIGNAL.
 CC SIGNAL 1 1
 CC CHAIN 1 109
 CC DISULFID 51 75
 CC DISULFID 52 91
 CC SEQUENCE 109 AA; 12297 MW; 9AE90F93 CRC32;
 Query Match 80.2%; Score 73; DB 1; Length 109;
 Best Local Similarity 63.6%; Pred. No. 4.63e-04;

Matches 7; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 90 VCTNPSDKWVQ 100

QY 2 VCADPSESXVQ 12

Search completed: Fri Feb 4 17:27:51 2000
Job time : 6 secs.



(TM)

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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 17:27:12 2000; MasPar time 3.58 Seconds
Tabular output not generated. 134.363 Million cell updates/sec

Title: >US-09-150-813-43
Description: (1-12) from US09150813.pep
Perfect Score: 91
Sequence: 1 QVCADPSESQVQ 12

Scoring table:
PAM 150
Gap 15

Searched: 122810 seqs, 40068593 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: pir60
1:pir1 2:pir2 3:pir3 4:pir4

Statistics: Mean 24.455; Variance 36.695; scale 0.666

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description	Pred. No.
1	91	100.0	50	2	monocyte adherence-in	4.73e-07
2	91	100.0	92	1	macrophage inflammato	4.73e-07
3	88	96.7	92	2	immune activation gen	2.11e-06
4	86	94.5	92	2	macrophage inflammato	5.68e-06
5	86	94.5	93	2	LD78-beta protein pre	5.68e-06
6	82	90.1	92	2	macrophage inflammato	4.01e-05
7	77	84.6	120	2	monocyte chemoattract	4.39e-04
8	76	83.5	92	2	macrophage inflammato	7.04e-04
9	75	82.4	92	2	macrophage inflammato	1.13e-03
10	75	82.4	109	2	macrophage chemotactic	1.13e-03
11	74	81.3	120	2	lymphocyte and monocy	1.80e-03
12	73	80.2	99	2	monocyte chemoattract	2.85e-03
13	72	79.1	99	2	monocyte chemoattract	4.53e-03
14	71	78.0	91	1	monocyte chemoattract	7.16e-03
15	71	78.0	99	2	monocyte chemotactic	7.16e-03
16	71	78.0	99	2	monocyte chemoattract	7.16e-03
17	70	76.9	95	2	interleukin-8 - dog	1.13e-02
18	70	76.9	101	2	interleukin-8 - sheep	1.13e-02
19	70	76.9	101	2	interleukin-8 - sheep	1.13e-02
20	70	76.9	103	2	interleukin-8 precurs	1.13e-02
21	70	76.9	103	2	alveolar macrophage c	1.13e-02
22	70	76.9	148	2	PDGF-inducible JE gly	1.13e-02
23	70	76.9	148	2	immediate-early serum	1.13e-02

24 69 75.8 103 2 A26736 transformation-induce 1.78e-02
25 69 75.8 103 2 I50417 RSV-induced protein - 1.78e-02
26 69 75.8 116 2 I49555 gene C10 protein - mo 1.78e-02
27 69 75.8 125 2 I46857 monocyte chemoattract 1.78e-02
28 68 74.7 99 2 A39296 monocyte chemoattract 2.79e-02
29 68 74.7 99 2 JC2336 monocyte chemoattract 2.79e-02
30 66 72.5 97 2 JC4912 eotaxin precursor - h 6.79e-02
31 66 72.5 99 2 A37034 interleukin-8 precurs 6.79e-02
32 65 71.4 91 1 A28815 monocyte chemoattract 1.05e-01
33 65 71.4 96 2 JC2478 eotaxin precursor - r 1.05e-01
34 65 71.4 96 2 I48099 eotaxin precursor - g 1.05e-01
35 64 70.3 101 2 I46871 interleukin-8 - rabbi 1.63e-01
36 64 70.3 114 1 ETHUL lymphotactin precurs 1.63e-01
37 63 69.2 89 2 I53416 interleukin-8 homolog 2.52e-01
38 63 69.2 89 2 A53497 pre-B-cell growth-sti 2.52e-01
39 63 69.2 93 2 I81182 cytokine - mouse 2.52e-01
40 63 69.2 93 2 G01540 cytokine SDF-1-beta - 2.52e-01
41 61 67.0 101 2 I48148 Neutrophil attractant 5.93e-01
42 59 64.8 114 1 ETMSL lymphotactin precurs 1.38e+00
43 58 63.7 896 2 S57723 lrp protein - human 2.08e+00
44 57 62.6 529 2 C70545 hypothetical protein 3.14e+00
45 57 62.6 761 2 JC5759 brain-specific serine 3.14e+00

ALIGNMENTS

RESULT 1
ENTRY #type fragment
TITLE monocyte adherence-induced protein 5 beta - human (fragment)
ORGANISM #formal_name Homo sapiens #common_name man
DATE 06-Nov-1992 #sequence_revision 06-Nov-1992 #text_change 03-May-1996
ACCESSION C60407
REFERENCE A60407
#authors Sporn, S.A.; Eierman, D.F.; Johnson, C.E.; Morris, J.; Martin, G.; Ladner, M.; Haskill, S.
#journal J. Immunol. (1990) 144:4434-4441
#title Monocyte adherence results in selective induction of novel genes sharing homology with mediators of inflammation and tissue repair.
#cross-references MUID:90257367
#accession C60407
#status preliminary; not compared with conceptual translation
#molecule_type mRNA
#residues 1-50 #label SPO
CLASSIFICATION #superfamily macrophage inflammatory protein
SUMMARY #length 50 #checksum 9927

Query Match 100.0%; Score 91; DB 2; Length 50;
Best Local Similarity 100.0%; Pred. No. 4.73e-07;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 30 QVCADPSESQVQ 41

QY 1 QVCADPSESQVQ 12

RESULT 2

ENTRY #type complete
TITLE macrophage inflammatory protein 1-beta precursor - human
ALTERNATE_NAMES cytokine HC21; G-26 protein; H400 homolog; lymphocyte activation gene 1 protein (LAG-1); MIP-1beta; PAT744; SCYA2 protein (misidentification); SIS gamma homolog; T-cell activation protein 2 (Act-2); T-cell activation protein gamma
ORGANISM #formal_name Homo sapiens #common_name man
DATE 07-Jun-1990 #sequence_revision 29-May-1998 #text_change 29-May-1998
ACCESSIONS JH0319; A40978; A31767; A37411; B30574; B45817; D30552
REFERENCE JH0319
#authors Baixeras, E.; Roman-Roman, S.; Jitsukawa, S.; Genevree, C.; Mechiche, S.; Viegas-Pequignot, E.; Hercend, T.; Triebel, F.

#journal Mol. Immunol. (1990) 27:1091-1102
#title Cloning and expression of a lymphocyte activation gene ('LAG-1').
#cross-references MUID:91061800
#accession JH0319
##status translation not shown
##molecule_type DNA
##residues 1-92 ##label BAI
##cross-references GB:X53682; NID:g34217; PID:g34218
##experimental_source natural killer cell, strain CD3-CD2+, F5, 5IIE5
REFERENCE A40978
#authors Napolitano, M.; Modi, W.S.; Cevario, S.J.; Gnarra, J.R.; Seunanez, H.N.; Leonard, W.J.
#journal J. Biol. Chem. (1991) 266:17531-17536
#title The gene encoding the Act-2 cytokine. Genomic structure, HTLV-I/tax responsiveness of 5' upstream sequences, and chromosomal localization.
#cross-references MUID:91373378
#accession A40978
##molecule_type DNA
##residues 1-14, 'S', 16-69, 'G', 71-92 ##label NAP
##cross-references GB:M69201; NID:g178021
##note 15-Ala was also found
REFERENCE A31767
#authors Lipes, M.A.; Napolitano, M.; Jeang, K.T.; Chang, N.T.; Leonard, W.J.
#journal Proc. Natl. Acad. Sci. U.S.A. (1988) 85:9704-9708
#title Identification, cloning, and characterization of an immune activation gene.
#cross-references MUID:89071764
#accession A31767
##molecule_type mRNA
##residues 1-92 ##label LIP
##cross-references GB:J04130; NID:g178017; PID:g178018
REFERENCE A37411
#authors Chang, H.C.; Reinherz, E.L.
#journal Eur. J. Immunol. (1989) 19:1045-1051
#title Isolation and characterization of a cDNA encoding a putative cytokine which is induced by stimulation via the CD2 structure on human T lymphocytes.
#cross-references MUID:89325421
#accession A37411
##molecule_type mRNA
##residues 1-92 ##label CHA
##cross-references GB:X16166; NID:g32035; PID:g32036
REFERENCE A30574
#authors Zipfel, P.F.; Balke, J.; Irving, S.G.; Kelly, K.; Siebenlist, U.
#journal J. Immunol. (1989) 142:1582-1590
#title Mitogenic activation of human T cells induces two closely related genes which share structural similarities with a new family of secreted factors.
#cross-references MUID:89140347
#accession B30574
##molecule_type mRNA
##residues 1-19, 'I', 21-92 ##label ZIP
##cross-references GB:M25316; NID:g602454; PID:g602455
REFERENCE A45817
#authors Miller, M.D.; Hata, S.; Malefyt, R.D.W.; Krangel, M.S.
#journal J. Immunol. (1989) 143:2907-2916
#title A novel polypeptide secreted by activated human T lymphocytes.
#cross-references MUID:90038522
#accession B45817
##molecule_type mRNA
##residues 7-55, 'I', 57-79, 'T', 81-92 ##label MIL
##cross-references GB:M57503; NID:g339726; PID:g339727
REFERENCE A30552
#authors Brown, K.D.; Zurawski, S.M.; Mosmann, T.R.; Zurawski, G.
#journal J. Immunol. (1989) 142:679-687
#title A family of small inducible proteins secreted by leukocytes are members of a new superfamily that includes leukocyte and fibroblast-derived inflammatory agents, growth factors,

and indicators of various activation processes.
#cross-references MUID:8903958
#accession D30552
##molecule_type mRNA
##residues 1-39, 'REASS', 46-92 ##label BRO
##cross-references GB:M23502; NID:g533212; PID:g533213
REFERENCE A52206
#authors Clore, G.M.; Lodi, P.J.; Garrett, D.S.; Gronenborn, A.M.
#submission submitted to the Brookhaven Protein Data Bank, January 1994
#cross-references PDB:1HUM
#contents annotation; conformation and disulfide bond assignments by (1)H-NMR, residues 24-92
COMMENT This protein is secreted by activated lymphocytes and monocytes. It is bound by chemokine (C-C) receptor 5 (see PIR:A43113) and receptor 1 (see PIR:A45177).

GENETICS
#gene GDB:LAG1
##cross-references GDB:127451; OMIM:153335
#map_position 17q21-17q21
#introns 26/1: 64/2
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS chemotaxis; cytokine; inflammation
FEATURE 1-23
24-92
34-58,35-74
#length 92 #molecular-weight 10212 #checksum 7597
SUMMARY

Query Match 100.0%; Score 91; DB 1; Length 92;
Best Local Similarity 100.0%; Pred. No. 4.73e-07;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 72 QVCADPSESQWQ 83
QY 1 QVCADPSESQWQ 12

RESULT 3
ENTRY 146730 #type complete
TITLE immune activation gene 2 - rabbit
ORGANISM #formal_name Oryctolagus cuniculus #common_name domestic rabbit

DATE 14-Feb-1997 #sequence_revision 14-Feb-1997 #text_change 09-May-1997
ACCESSIONS 146730
REFERENCE 146730

#authors Mori, S.; Goto, K.; Goto, F.; Mutakami, K.; Ohkawara, S.; Yoshinaga, M.
#journal Int. Immunol. (1994) 6:149-156
#title Dynamic changes in mRNA expression of neutrophils during the course of acute inflammation in rabbits.
#cross-references MUID:94198229
#accession 146730

#status Preliminary; translated from GB/EMBL/DBJ
##molecule_type mRNA
##residues 1-92 ##label MOR
##cross-references GB:D17402; NID:g599577; PID:g599578
CLASSIFICATION #superfamily macrophage inflammatory protein
SUMMARY #length 92 #molecular-weight 10066 #checksum 5637

Query Match 96.7%; Score 88; DB 2; Length 92;
Best Local Similarity 91.7%; Pred. No. 2.11e-06;
Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 72 QVCANPSESQWQ 83
QY 1 QVCADPSESQWQ 12

RESULT 4
ENTRY A30574 #type complete
TITLE macrophage inflammatory protein 1-alpha precursor - human


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ALTERNATE_NAMES  LD78-alpha protein precursor; lymphocyte tumor
                  promoter-induced protein; macrophage inflammatory protein
                  homolog GOS19-1; MIP-1alpha; PAT464; small inducible
                  cytokine A3; T-cell activation protein 1
ORGANISM          #formal_name Homo sapiens #common_name man
DATE             03-Aug-1992 #sequence_revision 03-Aug-1992 #text_change
                29-May-1998
ACCESSIONS       A35673; A30574; A30412; A24198; A30908
REFERENCE        #authors Nakao, M.; Nomiya, H.; Shimada, K.
                  Mol. Cell. Biol. (1990) 10:3646-3658
                  #journal Structures of human genes coding for cytokine LD78 and their
                  #title expression.
                  #cross-references MUID:90287155
                  #accession B35673
                  ##molecule_type DNA
                  ##residues 1-92 ##label NAK
                  ##cross-references GB:D90144; NID:g219905; PID:d1014875; PID:g219906
REFERENCE        A30574
                  #authors Zipfel, P.F.; Balke, J.; Irving, S.G.; Kelly, K.; Siebenlist,
                  #journal J. Immunol. (1989) 142:1582-1590
                  #title Mitogenic activation of human T cells induces two closely
                  #cross-references MUID:89140347
                  #accession A30574
                  ##molecule_type mRNA
                  ##residues 1-92 ##label ZIP
                  ##cross-references GB:M25315; NID:g602452; PID:g602453
REFERENCE        A30412
                  #authors Blum, S.; Forsdyke, R.E.; Forsdyke, D.R.
                  #journal DNA Cell Biol. (1990) 9:589-602
                  #title Three human homologs of a murine gene encoding an inhibitor
                  #cross-references MUID:91103879
                  #accession A30412
                  ##molecule_type mRNA
                  ##residues 1-92 ##label BLU
                  ##cross-references GDB:120368; OMIM:182283
                  #map_position 17q11-17q21
CLASSIFICATION  #superfamily macrophage inflammatory protein
FEATURE         #domain signal sequence #status predicted #label SIG\
                21-92 #product macrophage inflammatory protein 1-alpha #status
                33-57,34-73 #disulfide bonds #status predicted
                SUMMARY #length 92 #molecular-weight 10085 #checksum 4316
Query Match 94.5%; Score 86; DB 2; Length 92;
Best Local Similarity 91.7%; Pred. No. 5.68e-06;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Db 71 QVCADPSEWVQ 82
ENTRY       I52322
TITLE      macrophage inflammatory protein-1alpha - rat
ORGANISM   #formal_name Rattus norvegicus #common_name Norway rat
DATE       29-May-1998 #sequence_revision 29-May-1998 #text_change
                02-Jul-1998
ACCESSIONS I52322
REFERENCE   Shi, M.M.; Godleski, J.J.; Paulauskis, J.D.

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ALTERNATE_NAMES  macrophage inflammatory protein homolog GOS19-2; small
                  inducible cytokine A4
ORGANISM          #formal_name Homo sapiens #common_name man
DATE             28-Sep-1990 #sequence_revision 28-Sep-1990 #text_change
                24-Sep-1998
ACCESSIONS       B35673; B30412; S10157; B30908
REFERENCE        #authors Nakao, M.; Nomiya, H.; Shimada, K.
                  Mol. Cell. Biol. (1990) 10:3646-3658
                  #journal Structures of human genes coding for cytokine LD78 and their
                  #title expression.
                  #cross-references MUID:90287155
                  #accession B35673
                  ##molecule_type DNA
                  ##residues 1-93 ##label NAK
                  ##cross-references GB:D90145; NID:g219907; PID:d1014876; PID:g219908
REFERENCE        A30412
                  #authors Blum, S.; Forsdyke, R.E.; Forsdyke, D.R.
                  #journal DNA Cell Biol. (1990) 9:589-602
                  #title Three human homologs of a murine gene encoding an inhibitor
                  #cross-references MUID:91103879
                  #accession B30412
                  ##molecule_type DNA
                  ##residues 1-93 ##label BLU
                  ##cross-references GB:M24110; GB:M32338; NID:g182848; PID:g182849
REFERENCE        S10157
                  #authors Irving, S.G.; Zipfel, P.F.; Balke, J.; McBride, O.W.; Morton,
                  #journal Nucleic Acids Res. (1990) 18:3261-3270
                  #title Two inflammatory mediator cytokine genes are closely linked
                  #cross-references MUID:90287702
                  #accession S10157
                  ##molecule_type mRNA
                  ##residues 1-93 ##label IRV
                  ##cross-references EMBL:X52149; NID:g34750; PID:g296666
                  #COMMENT This protein is a member of a "small inducible" or "activation
                  specific" gene family, is likely to be an early-acting
                  interleukin, and is the product of a putative G0/G1 switch gene.
GENETICS        GDB:SCYA4
                  #gene GDB:120369; OMIM:182284
                  ##cross-references GDB:120369; OMIM:182284
                  #map_position 17q11-17q21
                  #introns 26/1; 64/2
CLASSIFICATION  #superfamily macrophage inflammatory protein
KEYWORDS        cytokine
FEATURE         1-22
                23-93
                SUMMARY #length 93 #molecular-weight 10161 #checksum 7784
Query Match 94.5%; Score 86; DB 2; Length 93;
Best Local Similarity 91.7%; Pred. No. 5.68e-06;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Db 72 QVCADPSEWVQ 83
ENTRY       I52322
TITLE      macrophage inflammatory protein-1alpha - rat
ORGANISM   #formal_name Rattus norvegicus #common_name Norway rat
DATE       29-May-1998 #sequence_revision 29-May-1998 #text_change
                02-Jul-1998
ACCESSIONS I52322
REFERENCE   Shi, M.M.; Godleski, J.J.; Paulauskis, J.D.

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#journal Biochem. Biophys. Res. Commun. (1995) 211:289-295
#title Molecular cloning and posttranscriptional regulation of
#authors macrophage inflammatory protein-1 alpha in alveolar
#cross-references MUID:95298037
#accession I52322
#status Preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-92 #label RES
##cross-references EMBL:U22414; NID:g790632; PID:g790633
CLASSIFICATION #superfamily macrophage inflammatory protein
SUMMARY #length 92 #molecular-weight 10335 #checksum 3184

Query Match 90.1%; Score 82; DB 2; Length 92;
Best Local Similarity 75.0%; Pred. No. 4.01e-05;
Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 71 QICADPKETWVQ 82
I:||||| I:||||
QY 1 QVCADPSESVMQ 12

RESULT 7
ENTRY I48147 #type complete
TITLE monocyte chemoattractant protein-1 - guinea pig
ORGANISM #formal_name Cavia porcellus #common_name guinea pig
DATE 02-Jul-1996 #sequence-revision 02-Jul-1996 #text_change
09-May-1997
ACCESSIONS I48147
#authors Yoshimura, T.
#journal J. Immunol. (1993) 150:5025-5032
#title cDNA cloning of guinea pig monocyte chemoattractant protein-1
#cross-references MUID:93267104
#accession I48147
#status preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-120 #label RES
##cross-references GB:L04985; NID:g349820; PID:g349821
GENETICS MCP-1
#gene #superfamily macrophage inflammatory protein
CLASSIFICATION #length 120 #molecular-weight 13741 #checksum 9252
SUMMARY

Query Match 84.6%; Score 77; DB 2; Length 120;
Best Local Similarity 66.7%; Pred. No. 4.39e-04;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 71 EVCADPTQKWVQ 82
I:||||| I:||||
QY 1 QVCADPSESVMQ 12

RESULT 8
ENTRY C30552 #type complete
TITLE macrophage inflammatory protein 1-beta precursor - mouse
ALTERNATE_NAMES H400; SIS gamma; T-cell activation protein gamma
ORGANISM #formal_name Mus musculus #common_name house mouse
DATE 28-Aug-1989 #sequence-revision 28-Aug-1989 #text_change
13-Nov-1998
ACCESSIONS C30552
#authors Brown, K.D.; Zurawski, S.M.; Mosmann, T.R.; Zurawski, G.
#journal J. Immunol. (1989) 142:679-687
#title A family of small inducible proteins secreted by leukocytes
are members of a new superfamily that includes leukocytes
and fibroblast-derived inflammatory agents, growth factors,
and indicators of various activation processes.
#cross-references MUID:89093958
#accession C30552
#molecule_type mRNA
#residues 1-92 #label BRO

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##cross-references GB:M33503; NID:g533244; PID:g533245
REFERENCE JLO088
#authors Sherry, B.; Tekamp-Olson, P.; Gallegos, C.; Bauer, D.;
Davatelis, G.; Wolpe, S.D.; Masiarz, F.; Coit, D.; Cerami,
A.
#journal J. Exp. Med. (1988) 168:2251-2259
#title Resolution of the two components of macrophage inflammatory
protein 1, and cloning and characterization of one of those
components, macrophage inflammatory protein 1 beta.
#cross-references MUID:89067830
#accession JLO088
#molecule_type mRNA
#residues 1-92 #label SHE
##cross-references GB:M35590; NID:g199696; PID:g199697
#accession PS0304
#molecule_type protein
#residues 24-33,'XX',36,'X',38 #label SH2
REFERENCE S22042
#authors Daubersies, P.; Lepretre, F.; Bailloul, B.; Grove, M.;
Pragnell, I.; Plumb, M.
#submission submitted to the EMBL Data Library, October 1991
#description Sequence of the murine macrophage inflammatory protein 1b
gene.
#accession S22042
#status preliminary
#molecule_type DNA
#residues 1-92 #label DAU
##cross-references EMBL:X62502; NID:g53126; PID:g53127
COMMENT This protein is a monokine.
GENETICS 26/1; 64/2
#introns #domain signal sequence #status predicted #label SIG\
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS glycoprotein
FEATURE 1-23
24-92
76 #product macrophage inflammatory protein 1-beta #status
experimental #label MAT\
#binding_site carbohydrate (Asn) (covalent) #status
predicted
SUMMARY #length 92 #molecular-weight 10168 #checksum 7516

Query Match 83.5%; Score 76; DB 2; Length 92;
Best Local Similarity 72.7%; Pred. No. 7.04e-04;
Matches 8; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 72 QICANPSPWV 82
I:||||| I:||||
QY 1 QVCADPSESVMQ 11

RESULT 9
ENTRY A32393 #type complete
TITLE macrophage inflammatory protein-1-alpha precursor - mouse
ALTERNATE_NAMES heparin-binding chemotaxis protein; L2G25B protein;
SCI/MIP-1a; SIS alpha; stem cell inhibitor/macrophage
inflammatory protein 1-alpha; T-cell activation protein
alpha; Ty5
ORGANISM #formal_name Mus musculus #common_name house mouse
DATE 17-Jul-1992 #sequence-revision 17-Jul-1992 #text_change
08-Sep-1997
ACCESSIONS S11685; A32393; S04533; A53885; A30552; PS0303; A27596;
156104
REFERENCE S11685
#authors Grove, M.; Lowe, S.; Graham, G.; Pragnell, I.; Plumb, M.
#journal Nucleic Acids Res. (1990) 18:5561
#title Sequence of the murine haemopoietic stem cell
inhibitor/macrophage inflammatory protein 1-alpha gene.
#cross-references MUID:91016858
#accession S11685
#molecule_type DNA
#residues 1-92 #label GRO
##cross-references EMBL:X53372; NID:g54062; PID:g297531
##note the authors' translation of the nucleotide sequence

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differs at several positions from the sequence given

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REFERENCE
#authors      Kwon, B.S.; Weissman, S.M.
#journal      Proc. Natl. Acad. Sci. U.S.A. (1989) 86:1963-1967
#title        cDNA sequence of two inducible T-cell genes.
#cross-references MUID:89184547
#accession    A32393
#molecule_type mRNA
#residues     1-92 ##label KWO
##cross-references GB:J04491; NID:g201524; PID:g201525
S04533
#authors      Davatelis, G.; Tekamp-Olson, P.; Wolpe, S.D.; Hermesen, K.;
              Luedke, C.; Gallegos, C.; Coit, D.; Merryweather, J.;
              Cerami, A.
#journal      J. Exp. Med. (1988) 167:1939-1944
#title        Cloning and characterization of a cDNA for murine macrophage
              inflammatory protein (MIP), a novel monokine with
              inflammatory and chemokinetic properties.
#cross-references MUID:88258380
#accession    S04533
#molecule_type mRNA
#residues     1-48, 'E', 50-90, 'I', 92 ##label DA2
##cross-references EMBL:X12531
#note         the authors translated the codon GAG for residue 49 as
              Asp and ATT for residue 91 as Asn
#note         the sequence has been corrected in reference A53885
#authors      A53885
              Davatelis, G.; Tekamp-Olson, P.; Wolpe, S.D.; Hermesen, K.;
              Luedke, C.; Gallegos, C.; Coit, D.; Merryweather, J.;
              Cerami, A.
#journal      J. Exp. Med. (1989) 170:2189
#contents     erratum
#accession    A53885
#molecule_type mRNA
#residues     1-92 ##label DAV
##cross-references EMBL:X12531; NID:g53122; PID:g53123
A30552
#authors      Brown, K.D.; Zurawski, S.M.; Mosmann, T.R.; Zurawski, G.
#journal      J. Immunol. (1989) 142:679-687
#title        A family of small inducible proteins secreted by leukocytes
              are members of a new superfamily that includes leukocyte
              and fibroblast-derived inflammatory agents, growth factors,
              and indicators of various activation processes.
#cross-references MUID:89093958
#accession    A30552
#molecule_type mRNA
#residues     1-21, 'L', 23-61, 'A', 63-92 ##label BRO
##cross-references GB:M23447; NID:g533240; PID:g533241
JL00088
#authors      Sherry, B.; Tekamp-Olson, P.; Gallegos, C.; Bauer, D.;
              Davatelis, G.; Wolpe, S.D.; Maslitz, F.; Coit, D.; Cerami,
              A.
#journal      J. Exp. Med. (1988) 168:2251-2259
#title        Resolution of the two components of macrophage inflammatory
              protein 1, and cloning and characterization of one of those
              components, macrophage inflammatory protein 1 beta.
#cross-references MUID:89067830
#accession    PS0303
#molecule_type mRNA
#residues     24-33, 'XX', 36-54 ##label SHE
A27596
#authors      Wolpe, S.D.; Davatelis, G.; Sherry, B.; Beutler, B.; Hesse,
              D.G.; Nguyen, H.T.; Moldawer, L.L.; Nathan, C.F.; Lowry,
              S.F.; Cerami, A.
#journal      J. Exp. Med. (1988) 167:570-581
#title        Macrophages secrete a novel heparin-binding protein with
              inflammatory and neutrophil chemokinetic properties.
#cross-references MUID:88154745
#accession    A27596
#molecule_type protein
#residues     24-33, 'XX', 36-42 ##label WOL
#note         26-Met, 30-Pro, and 39-Thr were also found
I56104
REFERENCE
#authors      Widmer, U.; Yang, Z.; van Deventer, S.; Manogue, K.R.;
              Sherry, B.; Cerami, A.
#journal      J. Immunol. (1991) 146:4031-4040
#title        Genomic structure of murine macrophage inflammatory
              protein-1 alpha and conservation of potential regulatory
              sequences with a human homolog, LD78.
#cross-references MUID:91237116
#accession    I56104
#molecule_type DNA
#status       preliminary; translated from GB/EMBL/DBJ
#residues     1-92 ##label RES
##cross-references GB:M73061; NID:g199694; PID:g199695
COMMENT       This protein is a monokine.
GENETICS
#introns      23/3; 26/1; 63/2
CLASSIFICATION
#superfamily macrophage inflammatory protein
KEYWORDS      heparin binding
FEATURE
1-23          #domain signal sequence #status predicted #label SIG\
24-92         #product macrophage inflammatory protein #status
              experimental #label MAT
SUMMARY
#length 92 #molecular-weight 10345 #checksum 5009
Query Match      82.4%; Score 75; DB 2; Length 92;
Best Local Similarity 66.7%; Pred. No. 1.13e-03;
Matches          8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
Db               71 QICADSKETWVQ 82
              1:111: 1:111
QY              1 QVCADPSESVMQ 12
              1:111: 1:111
RESULT          10
ENTRY          A54678 #type complete
TITLE          monocyte chemoattractant protein 3 precursor - human
ALTERNATE_NAMES monocyte chemoattractant protein MCP-3
ORGANISM       #formal_name Homo sapiens #common_name man
DATE           28-Oct-1994 #sequence_revision 28-Oct-1994 #text_change
              17-Mar-1999
ACCESSIONS     A54678; J01478; S32222
REFERENCE      A54678
#authors       Opendakker, G.; Fiten, P.; Nys, G.; Froyen, G.; Van Roy, N.;
              Speleman, F.; Laureys, G.; Van Damme, J.
#journal       Genomics (1994) 21:403-408
#title        The human MCP-3 gene (SCYA7): cloning, sequence analysis, and
              assignment to the C-C chemokine gene cluster on chromosome
              17q11.2-q12.
#cross-references MUID:94375065
#accession     A54678
#molecule_type DNA
#residues      1-109 ##label OPD
##cross-references GB:X72309
J01478
#authors       Opendakker, G.; Froyen, G.; Fiten, P.; Proost, P.; Van Damme,
              J.
#journal       Biochem. Biophys. Res. Commun. (1993) 191:535-542
#title        Human monocyte chemoattractant protein-3 (MCP-3): Molecular
              cloning of the cDNA and comparison with other chemokines.
#cross-references MUID:93213290
#accession     J01478
#molecule_type mRNA
#residues      1-109 ##label OP2
S32222
#authors       Minty, A.; Chalon, P.; Guillemot, J.C.; Kaghad, M.; Liauzun,
              P.; Magazin, M.; Miloux, B.; Minty, C.; Ramond, P.; Vita,
              N.; Luper, J.; Shire, D.; Ferrara, P.; Caput, D.
#submission    submitted to the EMBL Data Library, March 1993
#description    Molecular cloning of MCP-3: a human monocyte-derived monocyte
              chemoattractant protein.
#accession     S32222
#molecule_type mRNA
#residues      1-109 ##label MIN
##cross-references EMBL:X71087; NID:g288396; PID:g288397

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COMMENT      This protein induces proteinase secretion and chemotaxis by
              macrophages and monocytes.
GENETICS
#gene        GDB:SCYA7; SCYA6; MCP-3
##cross-references GDB:138473; OMIM:158106
#map_position 17q11-17q12
#introns      36/1; 75/2
CLASSIFICATION
#superfamily macrophage inflammatory protein
#cytokine; glycoprotein; inflammation
FEATURE
1-33
34-109
39
#domain signal sequence #status predicted #label SIG\
#product monocyte chemotactic protein 3 #status
#binding_site carbohydrate (Asn) (covalent) #status
#predicted
SUMMARY      #length 109 #molecular-weight 12356 #checksum 1535

Query Match      82.4%; Score 75; DB 2; Length 109;
Best Local Similarity 58.3%; Pred. No. 1-13e-03;
Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 83 EICADPTQKWWQ 94
QY 1 QVCADPSESQWQ 12

RESULT 11
ENTRY   JE0177 #type complete
TITLE   lymphocyte and monocyte chemoattractant CC chemokine - human
ORGANISM #formal_name Homo sapiens #common_name man
DATE     10-Jul-1998 #sequence_revision 10-Jul-1998 #text_change
17-Mar-1999
ACCESSIONS JE0177
REFERENCE   Youn, B.S.; Zhang, S.; Broxmeyer, H.E.; Antol, K.; Fraser
            Jr., M.J.; Hangoc, G.; Kwon, B.S.
            Biochem. Biophys. Res. Commun. (1998) 247:217-222
            Isolation and characterization of LMC, a novel lymphocyte and
            monocyte chemoattractant human CC chemokine, with
            myelosuppressive activity.
            #cross-references MUID:98308096
#accession JE0177
#molecule_type mRNA
#residues 1-120 #label YOU
SUMMARY      #length 120 #molecular-weight 13600 #checksum 230

Query Match      81.3%; Score 74; DB 2; Length 120;
Best Local Similarity 50.0%; Pred. No. 1.80e-03;
Matches 6; Conservative 5; Mismatches 1; Indels 0; Gaps 0;

Db 74 EVCNPNDDWVQ 85
QY 1 QVCADPSESQWQ 12

RESULT 12
ENTRY   JC2417 #type complete
TITLE   monocyte chemoattractant protein-2 precursor - pig
ORGANISM #formal_name Sus scrofa domestica #common_name domestic pig
DATE     24-Feb-1995 #sequence_revision 24-Feb-1995 #text_change
17-Mar-1999
ACCESSIONS JC2417
REFERENCE   Hosang, K.; Knoke, I.; Klaudiny, J.; Wempe, F.; Wuttke, W.;
            Scheit, K.H.
            Biochem. Biophys. Res. Commun. (1994) 205:148-153
            Porcine luteal cells express monocyte chemoattractant
            protein-2 (MCP-2): Analysis by cDNA cloning and northern
            analysis.
            #cross-references MUID:95091716
#accession JC2417
#molecule_type mRNA
#residues 1-99 #label HOS

```

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##experimental_source corpus luteum
CLASSIFICATION #superfamily macrophage inflammatory protein
FEATURE
1-23
24-99
#domain signal sequence #status predicted #label SIG\
#product monocyte chemoattractant protein-2 #status
#predicted #label MCP
SUMMARY      #length 99 #molecular-weight 10903 #checksum 7556

Query Match      80.2%; Score 73; DB 2; Length 99;
Best Local Similarity 66.7%; Pred. No. 2.85e-03;
Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 73 EVCADPQKWWQ 84
QY 1 QVCADPSESQWQ 12

RESULT 13
ENTRY   A60299 #type complete
TITLE   monocyte chemoattractant protein 1 precursor - human
ALTERNATE_NAMES GDCF-1; glioma-derived monocyte chemotactic factor 1; MCAF;
                MCP-1; monocyte chemotactic factor 1; monocyte secretory
                protein; tumor-derived chemotactic factor
                CONTAINS glioma-derived chemotactic factor 2 (GDCF-2)
                ORGANISM #formal_name Homo sapiens #common_name man
                DATE     20-Feb-1993 #sequence_revision 20-Feb-1993 #text_change
                20-Mar-1998
                ACCESSIONS A35474; A33476; S03339; I51841; A60299; A32300; A32396;
                A34561; I57488; JCI096
                A35474
                REFERENCE   Shyy, Y.J.; Li, Y.S.; Kolattukudy, P.E.
                Biochem. Biophys. Res. Commun. (1990) 169:346-351
                Structure of human monocyte chemotactic protein gene and its
                regulation by TPA.
                #cross-references MUID:90290466
#accession A35474
#molecule_type DNA
#residues 1-99 #label SHY
#cross-references GB:M37719; NID:g187447; PID:g487124
A33476
REFERENCE   Rollins, B.J.; Stier, P.; Ernst, T.; Wong, G.G.
            Mol. Cell. Biol. (1989) 9:4687-4695
            The human homolog of the JE gene encodes a monocyte secretory
            protein.
            #cross-references MUID:90097880
#accession A33476
#molecule_type mRNA
#residues 1-99 #label ROL
#cross-references GB:M30816; GB:M31625; GB:M31626; NID:g188701;
                PID:g386961
S03339
REFERENCE   Yoshimura, T.; Yuhki, N.; Moore, S.K.; Appella, E.; Lerman,
            M.I.; Leonard, E.J.
            FEBS Lett. (1989) 244:487-493
            Human monocyte chemoattractant protein-1 (MCP-1). Full-length
            cDNA cloning, expression in mitogen-stimulated blood
            mononuclear leukocytes, and sequence similarity to mouse
            competence gene JE.
            #cross-references MUID:89153605
#accession S03339
#status not compared with conceptual translation
#molecule_type mRNA
#residues 1-99 #label YOS
#cross-references GB:X14768; NID:g34513; PID:g34514
#experimental_source glioma cell line U-105MG
I51841
REFERENCE   Yoshimura, T.; Leonard, E.J.
            Adv. Exp. Med. Biol. (1991) 305:47-56
            Human monocyte chemoattractant protein-1 (MCP-1).
            #cross-references MUID:92095166
#accession I51841
#status preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA

```

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##residues 1-99 ##label Y02
##cross-references GB:S71513; NID:g240867; PID:g240868
REFERENCE A60299
#authors Bottazzi, B.; Colotta, F.; Sica, A.; Nobili, N.; Mantovani, A.
#journal Int. J. Cancer (1990) 45:795-797
#title A chemoattractant expressed in human sarcoma cells (tumor-derived chemotactic factor, TDCF) is identical to monocyte chemoattractant protein-1/monocyte chemotactic and activating factor (MCP-1/MCAF).
#accession A60299
#status not compared with conceptual translation
#molecule_type mRNA
##residues 1-99 ##label BOT
REFERENCE A32300
#authors Furutani, Y.; Nomura, H.; Notake, M.; Oyama, Y.; Fukui, T.; Yamada, M.; Larsen, C.G.; Oppenheim, J.J.; Matsushima, K.
#journal Biochem. Biophys. Res. Commun. (1989) 159:249-255
#title Cloning and sequencing of the cDNA for human monocyte chemotactic and activating factor (MCAF).
#cross-references MUID:89165862
#accession A32300
#status not compared with conceptual translation
#molecule_type mRNA
##residues 1-99 ##label FUR
##cross-references GB:M24545; NID:g187434; PID:g307163
REFERENCE A32396
#authors Robinson, E.A.; Yoshimura, T.; Leonard, E.J.; Tanaka, S.; Griffin, P.R.; Shabanowitz, J.; Hunt, D.F.; Appella, E.
#journal Proc. Natl. Acad. Sci. U.S.A. (1989) 86:1850-1854
#title Complete amino acid sequence of a human monocyte chemoattractant, a putative mediator of cellular immune reactions.
#cross-references MUID:89184525
#accession A32396
#molecule_type protein
##residues 'X', 25-99 ##label ROB
REFERENCE A34561
#authors Decock, B.; Conings, R.; Lenaerts, J.P.; Billiau, A.; Van Damme, J.
#journal Biochem. Biophys. Res. Commun. (1990) 167:904-909
#title Identification of the monocyte chemotactic protein from human osteosarcoma cells and monocytes: detection of a novel N-terminally processed form.
#cross-references MUID:90211336
#accession A34561
#molecule_type protein
##residues 29-33, 'XX', 36-52; 82-92 ##label DEC
REFERENCE I57488
#authors Li, Y.S.; Shyy, Y.J.; Wright, J.G.; Valente, A.J.; Cornhill, J.F.; Kolattukudy, P.E.
#journal Mol. Cell. Biochem. (1993) 126:61-68
#title The expression of monocyte chemotactic protein (MCP-1) in human vascular endothelium in vitro and in vivo.
#cross-references MUID:94150478
#accession I57488
#status translated from GB/EMBL/DBJ
#molecule_type mRNA
##residues 1-99 ##label LIY
##cross-references GB:S69738; NID:g545464; PID:g545465
REFERENCE JCI096
#authors Ye, Q.N.; Su, G.F.; Yuan, Y.; Huang, C.F.
#journal Chinese J. Microbiol. Immunol. (1994) 14:29-32
#title The PCR cloning and sequencing of human monocyte chemoattractant protein-1 (MCP-1) gene.
#accession JCI096
#molecule_type mRNA
##residues 24-28, 'Q', 30-99 ##label YEQ
GENETICS
#gene GDB:SCYA2
#cross-references GDB:125279; OMIM:158105
#map_position 17q11.2-17q12
CLASSIFICATION #superfamily macrophage inflammatory protein

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cytokine; glycoprotein; inflammation; pyroglutamic acid

#domain signal sequence #status predicted #label SIG\

#product monocyte chemoattractant protein 1 #status experimental #label MAR\

#product monocyte chemoattractant protein 1, short form #status experimental #label MAR2\

#modified site pyrrolidone carboxylic acid (Gln) (in mature form) #status experimental\

#binding_site carbohydrate (Asn) (covalent) #status predicted

#length 99 #molecular_weight 11025 #checksum 7984

Query Match 79.1%; Score 72; DB 2; Length 99;

Best Local Similarity 58.3%; Pred. No. 4.53e-03;

Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 73 EICADPKQKWQ 84

:|||||:||||

QY 1 QVCADPSESVMQ 12

RESULT 14

ENTRY A46539 #type complete

TITLE monocyte chemoattractant cytokine RANTES precursor - mouse

ALTERNATE_NAMES MuRantes

ORGANISM #formal_name Mus musculus #common_name house mouse

DATE 18-Jun-1993 #sequence_revision 16-Aug-1996 #text_change 23-Jan-1999

ACCESSIONS I48875; A46539; I48654; I56970

REFERENCE I48875

#authors Danoff, T.M.; Lalley, P.A.; Chang, Y.S.; Heeger, P.S.; Neilson, E.G.

#journal J. Immunol. (1994) 152:1182-1189

#title Cloning, genomic organization, and chromosomal localization of the Scya5 gene encoding the murine chemokine RANTES.

#cross-references MUID:94132613

#accession I48875

##status preliminary; translated from GB/EMBL/DBJ

##molecule_type DNA

##residues 1-91 ##label DAN

##cross-references EMBL:U02298; NID:g460090; PID:g460091

REFERENCE A46539

#authors Schall, T.J.; Simpson, N.J.; Mak, J.Y.

#journal Eur. J. Immunol. (1992) 22:1477-1481

#title Molecular cloning and expression of the murine RANTES cytokine: structural and functional conservation between mouse and man.

#cross-references MUID:92289805

#accession A46539

##molecule_type mRNA

##residues 1-18, 'A', 20-91 ##label SCH

##cross-references GB:S37648; NID:g250207; PID:g250208

##experimental_source macrophage cell line P05-1.8

##note sequence extracted from NCBI backbone (NCBIN:106768, NCBIP:106770)

REFERENCE I48654

#authors Shin, H.S.; Drysdale, B.E.; Shin, M.L.; Noble, P.W.; Fisher, S.N.; Paznekas, W.A.

#journal Mol. Cell. Biol. (1994) 14:2914-2925

#title Definition of a lipopolysaccharide-responsive element in the 5'-flanking regions of Murantes and crg-2.

#cross-references MUID:94217689

#accession I48654

##status translation not shown; translated from GB/EMBL/DBJ

##molecule_type DNA

##residues 1-91 ##label SHI

##cross-references EMBL:X0675; NID:g475205; PID:g475206

REFERENCE I56970

#authors Neilson, E.G.; Krensky, A.

#journal Kidney Int. (1992) 41:220-225

#title Isolation and characterization of cDNA from renal tubular epithelium encoding murine Rantes: A small intercrine from

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#cross-references MUID:92277990
#accession I56970
##status translated from GB/EMBL/DBJ
##molecule_type mRNA
##residues 1-40,'E',42-91 ##label NEI
##cross-references GB:M77747; NID:g200649; PID:g200650
COMMENT This chemoattractant for monocytes but not neutrophils is an
immediate-early response protein to LPS stimulation.

GENETICS
#introns 26/1; 63/2
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS chemotaxis; cytokine; immediate-early protein; inflammation
FEATURE
1-23
24-91
SUMMARY #length 91 #molecular-weight 10071 #checksum 3010

Query Match 78.0%; Score 71; DB 1; Length 91;
Best Local Similarity 66.7%; Pred.No. 7.16e-03;
Matches 8; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Db 71 QVCANPEKKWVQ 82
QY 1 QVCADPSESQVQ 12

RESULT 15
ENTRY #type complete
TITLE monocyte chemotactic protein-2 precursor - human
ORGANISM #formal_name Homo sapiens #common_name man
DATE 02-May-1997 #sequence_revision 18-Jul-1997 #text_change
17-Mar-1999
ACCESSIONS JC5295
REFERENCE JC5295
#authors Van Coillie, E.; Froyen, G.; Nomiya, H.; Miura, R.; Fiten,
P.; Van Aelst, I.; Van Damme, J.; Odenakker, G.
#journal Biochem. Biophys. Res. Commun. (1997) 231:726-730
#title Human monocyte chemotactic protein-2: cDNA cloning and
regulated expression of mRNA in mesenchymal cells.
#cross-references MUID:97224420
#accession JC5295
##molecule_type mRNA
##residues 1-99 ##label VAN
##cross-references GB:I10802; NID:g1924937; PID:g294088; PID:g1924938
##experimental_source bone marrow
COMMENT This protein belongs to the beta-chemokine family which is one of
the major HIV-suppressive factors. It plays roles in autoimmune
processes such as multiple sclerosis and rheumatoid arthritis and
in tumor biology, and contribute to the trafficking and
recruitment of the responsive cells.

GENETICS
#gene mcp-2
CLASSIFICATION #superfamily macrophage inflammatory protein
FEATURE
1-23
24-99
SUMMARY #length 99 #molecular-weight 11246 #checksum 6596

Query Match 78.0%; Score 71; DB 2; Length 99;
Best Local Similarity 66.7%; Pred.No. 7.16e-03;
Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 73 EVCADPKRWVR 84
QY 1 QVCADPSESQVQ 12
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Search completed: Fri Feb 4 17:27:28 2000
Job time : 16 secs.

 WAREHOUSE
 (TM)

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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 17:33:35 2000; MasPar time 2.52 Seconds
 134.696 Million cell updates/sec

Tabular output not generated.

Title: >US-09-150-813-44
 Description: (1-12) from US09150813.ppe
 Perfect Score: 91

Sequence: 1 QVCADPSESQVQ 12

Scoring table: PAM 150
 Gap 15

Searched: 77977 seqs, 28268293 residues

Post-processing: Minimum Match 0%
 Listing first 45 summaries

Database: swiss-prot37
 1:swissprot

Statistics: Mean 25.122; Variance 33.379; scale 0.753

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	ID	Description	Pred. No.
1	91	100.0	92	1	MACROPHAGE INFLAMMATOR	2.87e-08
2	88	96.7	92	1	MACROPHAGE INFLAMMATOR	1.53e-07
3	86	94.5	92	1	MACROPHAGE INFLAMMATOR	4.59e-07
4	86	94.5	93	1	MACROPHAGE INFLAMMATOR	4.59e-07
5	82	90.1	92	1	MACROPHAGE INFLAMMATOR	4.04e-06
6	79	86.8	92	1	MACROPHAGE INFLAMMATOR	2.01e-05
7	77	84.6	120	1	MACROPHAGE INFLAMMATOR	5.79e-05
8	76	83.5	92	1	MACROPHAGE INFLAMMATOR	9.78e-05
9	75	82.4	92	1	MACROPHAGE INFLAMMATOR	1.65e-04
10	75	82.4	98	1	MACROPHAGE INFLAMMATOR	1.65e-04
11	75	82.4	99	1	MACROPHAGE INFLAMMATOR	1.65e-04
12	74	81.3	89	1	MACROPHAGE INFLAMMATOR	2.76e-04
13	73	80.2	93	1	MACROPHAGE INFLAMMATOR	4.63e-04
14	73	80.2	99	1	MACROPHAGE INFLAMMATOR	4.63e-04
15	73	80.2	109	1	MACROPHAGE INFLAMMATOR	4.63e-04
16	72	79.1	99	1	MACROPHAGE INFLAMMATOR	7.72e-04
17	72	79.1	99	1	MACROPHAGE INFLAMMATOR	7.72e-04
18	72	79.1	101	1	MACROPHAGE INFLAMMATOR	7.72e-04
19	71	78.0	91	1	MACROPHAGE INFLAMMATOR	1.28e-03
20	71	78.0	92	1	MACROPHAGE INFLAMMATOR	1.28e-03
21	71	78.0	99	1	MACROPHAGE INFLAMMATOR	1.28e-03
22	71	78.0	99	1	MACROPHAGE INFLAMMATOR	1.28e-03
23	70	76.9	90	1	MACROPHAGE INFLAMMATOR	2.13e-03

24	70	76.9	101	1	IL8_CANFA	INTERLEUKIN-8 PRECURSOR	2.13e-03
25	70	76.9	101	1	IL8_SHEEP	INTERLEUKIN-8 PRECURSOR	2.13e-03
26	70	76.9	103	1	IL8_PIG	INTERLEUKIN-8 PRECURSOR	2.13e-03
27	70	76.9	148	1	MCPI1_RAT	MONOCYTE CHEMOTACTIC P	2.13e-03
28	70	76.9	148	1	MCPI1_MOUSE	MONOCYTE CHEMOTACTIC P	2.13e-03
29	69	75.8	74	1	MCPI1_BOVIN	MONOCYTE CHEMOTACTIC P	3.51e-03
30	69	75.8	103	1	EMFI_CHICK	EMBRYO FIBROBLAST PROT	3.51e-03
31	69	75.8	116	1	C10_MOUSE	C10 PROTEIN PRECURSOR	3.51e-03
32	69	75.8	125	1	MCPI1_RABIT	MONOCYTE CHEMOTACTIC P	3.51e-03
33	68	74.7	97	1	EOTA_MOUSE	EOTAXIN PRECURSOR (EOS	5.79e-03
34	68	74.7	97	1	EOTA_RAT	EOTAXIN PRECURSOR (EOS	5.79e-03
35	68	74.7	99	1	MCPI1_BOVIN	MONOCYTE CHEMOTACTIC P	5.79e-03
36	68	74.7	104	1	MCPI1_MOUSE	MONOCYTE CHEMOTACTIC P	5.79e-03
37	67	73.6	101	1	IL8_BOVIN	INTERLEUKIN-8 PRECURSOR	9.49e-03
38	66	72.5	97	1	EOTA_HUMAN	EOTAXIN PRECURSOR (EOS	1.55e-02
39	66	72.5	99	1	IL8_HUMAN	INTERLEUKIN-8 PRECURSOR	1.55e-02
40	66	72.5	101	1	IL8_CERTO	INTERLEUKIN-8 PRECURSOR	1.55e-02
41	66	72.5	101	1	IL8_MACMU	INTERLEUKIN-8 PRECURSOR	1.55e-02
42	66	72.5	122	1	MILG_MOUSE	MACROPHAGE INFLAMMATOR	1.55e-02
43	65	71.4	50	1	SISD_PIG	T-CELL SPECIFIC RANTES	2.52e-02
44	65	71.4	91	1	SISD_CAVPO	T-CELL SPECIFIC RANTES	2.52e-02
45	65	71.4	96	1	EOTA_CAVPO	EOTAXIN PRECURSOR (EOS	2.52e-02

ALIGNMENTS

RESULT	1	STANDARD;	PRT;	92 AA.
ID	MILB_HUMAN	P22617; Q13704;		
AC	P13236;	REL. 13, CREATED		
DT	01-JAN-1990	(REL. 13, LAST SEQUENCE UPDATE)		
DT	01-JAN-1990	(REL. 13, LAST SEQUENCE UPDATE)		
DT	01-NOV-1997	(REL. 35, LAST ANNOTATION UPDATE)		
DE	MACROPHAGE INFLAMMATORY PROTEIN 1-BETA PRECURSOR (MIP-1-BETA) (T-CELL			
DE	ACTIVATION PROTEIN 2) (ACT-2) (PAT 744) (H400) (SIS-GAMMA) (LYMPHOCYTE			
DE	ACTIVATION GENE-1 PROTEIN) (LAG-1) (HC21) (SMALL INDUCIBLE CYTOKINE			
DE	A4) (G-26 T LYMPHOCYTE-SECRETED PROTEIN).			
GN	SCY44 OR MIP1B OR LAG1.			
OS	HOMO SAPIENS (HUMAN).			
OC	EUKARYOTA; METAZOAN; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;			
OC	PRIMATES; CATARRHINI; HOMINIDAE; HOMO.			
RN	[1]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE; 89071764.			
RA	LIPES M.A., NAPOLITANO M., JEANG K.-T., CHANG N.T., LEONARD W.J.;			
RT	"Identification, cloning, and characterization of an immune			
RT	activation gene.";			
RL	PROC. NATL. ACAD. SCI. U.S.A. 85:9704-9708(1988).			
RN	[2]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE; 89140347.			
RA	ZIPPEL P.F., BALKE J., IRVING S.G., KELLY K., SIEBENLIST U.;			
RT	"Mitogenic activation of human T cells induces two closely related			
RT	genes which share structural similarities with a new family of			
RT	secreted factors.";			
RL	J. IMMUNOL. 142:1582-1590(1989).			
RN	[3]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE; 89093958.			
RA	BROWN K.D., ZURAWSKI S.M., MOSMANN T.R., ZURAWSKI G.;			
RT	"A family of small inducible proteins secreted by leukocytes are			
RT	members of a new superfamily that includes leukocyte and			
RT	fibroblast-derived inflammatory agents, growth factors, and			
RT	indicators of various activation processes.";			
RL	J. IMMUNOL. 142:679-687(1989).			
RN	[4]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE; 91061800.			
RA	BALXERAS E., ROMAN-ROMAN S., JITSUKAWA S., GENEVEE C., MECHICHE S.,			
RT	VIEGAS-PRUIGNOT E., HERCEND T., TRIEBEL F.;			
RT	"Cloning and expression of a lymphocyte activation gene (LAG-1).";			
RL	MOL. IMMUNOL. 27:1091-1102(1990).			
RN	[5]			
RP	SEQUENCE FROM N.A.			

TISSUE-T-CELL;
 MEDLINE; 89325421.
 CHANG H.C., REINHERZ E.L.;
 "Isolation and characterization of a cDNA encoding a putative
 cytokine which is induced by stimulation via the CD2 structure on
 human T lymphocytes.";
 EUR. J. IMMUNOL. 19:1045-1051(1989).
 [6]
 SEQUENCE FROM N.A.
 MEDLINE; 91373378.
 NAPOLITANO M., MODI W.S., CEVARIO S.J., GNARRA J.R., SEJANEZ H.N.,
 LEONARD W.J.;
 "The gene encoding the Act-2 cytokine. Genomic structure, HTLV-I/Tax
 responsiveness of 5' upstream sequences, and chromosomal
 localization.";
 J. BIOL. CHEM. 266:17531-17536(1991).
 [7]
 SEQUENCE OF 6-92 FROM N.A.
 MEDLINE; 90038522.
 MILLER M.D., HATA S., WAAL MALEYTT R., KRANGEL M.S.;
 "A novel polypeptide secreted by activated human T lymphocytes.";
 J. IMMUNOL. 143:2907-2916(1989).
 [8]
 STRUCTURE BY NMR.
 MEDLINE; 94182137.
 LODI P.J., GARRETT D.S., KUSCEWSKI J., TSANG M.L.S., WEATHERBEE J.A.,
 LEONARD W.J., GROENBORN A.M., CLORE G.M.;
 "High-resolution solution structure of the beta chemokine hMIP-1 beta
 by multidimensional NMR.";
 SCIENCE 263:1762-1767(1994).
 [9]
 FUNCTION: MONOKINE WITH INFLAMMATORY AND CHEMOKINETIC PROPERTIES.
 SUBUNIT: HOMODIMER.
 INDUCTION: BY MITOGENS.
 SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 C-C) (CHEMOKINE CC).

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 EMBL; M23502; G533213; -
 DR EMBL; M25316; G602455; -
 DR EMBL; J04130; G178018; -
 DR EMBL; X53683; G34218; -
 DR EMBL; X53682; E35870; ALT_SEQ.
 DR EMBL; X16166; G32036; -
 DR EMBL; M69203; G1332376; -
 DR EMBL; M69201; G1332376; JOINED.
 DR EMBL; M69202; G1332376; JOINED.
 DR EMBL; M57503; G339727; -
 DR PIR; A31767; A31767; -
 DR PIR; B30574; B30574; -
 DR PIR; D30552; D30552; -
 DR PIR; JH0319; JH0319; -
 DR PIR; A37411; A37411; -
 DR PDB; 1HUN; 30-APR-94.
 DR PDB; 1HUN; 30-APR-94.
 MIM; 182284; -
 PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 PFAM; PF00048; i18; 1.
 CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL; 3D-STRUCTURE.
 SIGNAL 1 23
 CHAIN 24 92 MACROPHAGE INFLAMMATORY PROTEIN 1-BETA.
 DISULFID 34 58 BY SIMILARITY.
 FT DISULFID 35 74 BY SIMILARITY.
 FT CONFLICT 6 6
 FT CONFLICT 15 15 T -> C (IN REF. 7).
 FT CONFLICT 15 15 A -> S (IN REF. 6).
 FT CONFLICT 20 20 P -> L (IN REF. 2).
 FT CONFLICT 40 45 ARKLPR -> REASS (IN REF. 3).

FT CONFLICT 56 56 S -> I (IN REF. 7).
 FT CONFLICT 70 70 S -> G (IN REF. 6).
 FT STRAND 29 29 S -> T (IN REF. 7).
 FT STRAND 33 33
 FT HELIX 45 47
 FT STRAND 50 53
 FT STRAND 63 66
 FT STRAND 72 75
 FT TURN 77 78
 FT HELIX 80 90
 SQ SEQUENCE 92 AA; 10212 MW; F18E7AFD CRC32;
 Query Match 100.0%; Score 91; DB 1; Length 92;
 Best Local Similarity 100.0%; Pred. No. 2.87e-08;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Db 72 QVCADPSESQVQ 83
 QY 1 QVCADPSESQVQ 12
 RESULT 2
 ID MILB_RABIT STANDARD; PRT; 92 AA.
 AC P46632;
 DT 01-NOV-1995 (REL. 32, CREATED)
 DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
 DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
 DE MACROPHAGE INFLAMMATORY PROTEIN 1-BETA PRECURSOR (MIP-1-BETA) (IMMUNE
 DE ACTIVATION PROTEIN 2) (ACT-2).
 GN SCY44.
 OS ORYCTOLAGUS CUNICULUS (RABBIT).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC LAGOMORPHA; LEPORIDAE; ORYCTOLAGUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN-NEW ZEALAND WHITE;
 RX MEDLINE; 94198229.
 RA MORI S., GOTO K., GOTO F., MUTAKAMI K., OHKAWARA S., YOSHINAGA M.;
 "Dynamic changes in mRNA expression of neutrophils during the course
 of acute inflammation in rabbits.";
 INT. IMMUNOL. 6:149-156(1994).
 RL
 CC -!- FUNCTION: MONOKINE WITH INFLAMMATORY AND CHEMOKINETIC PROPERTIES
 CC (BY SIMILARITY).
 CC -!- SUBUNIT: HOMODIMER (BY SIMILARITY).
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 C-C) (CHEMOKINE CC).

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 EMBL; D17402; G599578; -
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSP; P13236; 1HUN.
 CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 SIGNAL 1 23
 CHAIN 24 92 MACROPHAGE INFLAMMATORY PROTEIN 1-BETA.
 DISULFID 34 58 BY SIMILARITY.
 FT DISULFID 35 74 BY SIMILARITY.
 SQ SEQUENCE 92 AA; 10066 MW; A629AB2D CRC32;
 Query Match 96.78; Score 88; DB 1; Length 92;
 Best Local Similarity 91.7%; Pred. No. 1.53e-07;
 Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
 Db 72 QVCANPSESQVQ 83
 QY 1 QVCANPSESQVQ 83

QY 1 QVCADPSESQWQ 12
 RESULT 3
 ID M10_HUMAN STANDARD; PRT; 92 AA.
 AC P10147;
 DT 01-MAR-1989 (REL. 10, CREATED)
 DT 01-MAR-1989 (REL. 10, LAST SEQUENCE UPDATE)
 DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
 DE MACROPHAGE INFLAMMATORY PROTEIN 1-ALPHA PRECURSOR (MIP-1-ALPHA)
 DE (TONSILLAR LYMPHOCYTE LD78 ALPHA PROTEIN) (GOS19-1 PROTEIN) (SIS-BETA)
 DE (PAT 464.1) (SMALL INDUCIBLE CYTOKINE A3).
 GN SCVA3 OR MIPLA
 OS HOMO SAPIENS (HUMAN)
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 86223879.
 RA OBARU K., FUKUDA M., MAEDA S., SHIMADA K.;
 RT "A cDNA clone used to study mRNA inducible in human tonsillar
 lymphocytes by a tumor promoter.";
 RL J. BIOCHEM. 99:885-894(1986).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 89140347.
 RA ZIPPEL P.F., BALKE J., IRVING S.G., KELLY K., SIEBENLIST U.;
 RT "Mitogenic activation of human T cells induces two closely related
 genes which share structural similarities with a new family of
 secreted factors.";
 RL J. IMMUNOL. 142:1582-1590(1989).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 91103879.
 RA BLUM S., FORSDYKE R.E., FORSDYKE D.R.;
 RT "Three human homologs of a murine gene encoding an inhibitor of stem
 cell proliferation.";
 RL DNA CELL BIOL. 9:589-602(1990).
 RN [4]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 90287155.
 RA NAKAO M., NOMIYAMA H., SHIMADA K.;
 RT "Structures of human genes coding for cytokine LD78 and their
 expression.";
 RL MOL. CELL. BIOL. 10:3646-3658(1990).
 CC -!- FUNCTION: MONOKINE WITH INFLAMMATORY AND CHEMOKINETIC PROPERTIES.
 CC -!- INDUCTION: BY TPA OR PHA (TPA = 12-O-TETRADECANOYL PHORBOL-13
 ACETATE (TUMOR PROMOTER); PHA = PHYTOHEMAGGLUTININ (T-CELL
 MITOGEN)).
 CC -!- SIMILARITY: LD78-ALPHA AND -BETA ARE VERY CLOSELY RELATED.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 C-C) (CHEMOKINE CC).
 CC
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 CC
 DR EMBL; D00044; D1000469; -
 DR EMBL; M23452; G188559; -
 DR EMBL; M25315; G602453; -
 DR EMBL; X03754; G758089; -
 DR EMBL; X04018; G34297; ALT_SEQ.
 DR EMBL; M23178; G182847; -
 DR EMBL; D90144; G219906; -
 DR PIR; A24198; A24198.
 DR PIR; A30574; A30574.
 DR MIM; 182283; -
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.

DR HSP; P13236; LHUN.
 KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 FT SIGNAL 1 22 POTENTIAL.
 FT CHAIN 23 92 MACROPHAGE INFLAMMATORY PROTEIN 1-ALPHA.
 FT DISULFID 33 57 BY SIMILARITY.
 FT DISULFID 34 73 BY SIMILARITY.
 SQ SEQUENCE 92 AA; 10085 MW; C24DD919 CRC32;
 Query Match 94.5%; Score 86; DB 1; Length 92;
 Best Local Similarity 91.7%; Pred. No. 4.59e-07;
 Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 Db 71 QVCADPSESQWQ 82
 |||||
 QY 1 QVCADPSESQWQ 12
 RESULT 4
 ID M10_HUMAN STANDARD; PRT; 93 AA.
 AC P16619;
 DT 01-AUG-1990 (REL. 15, CREATED)
 DT 01-AUG-1990 (REL. 15, LAST SEQUENCE UPDATE)
 DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
 DE TONSILLAR LYMPHOCYTE LD78 BETA PROTEIN PRECURSOR (GOS19-2 PROTEIN)
 DE (PAT 464.2).
 GN SCVA3L1 OR 464.2.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 90287702.
 RA IRVING S.G., ZIPPEL P.F., BALKE J., MCBRIDE O.W., MORTON C.C.,
 RA BURD P.R., SIEBENLIST U., KELLY K.;
 RT "Two inflammatory mediator cytokine genes are closely linked and
 variably amplified on chromosome 11q.";
 RL NUCLEIC ACIDS RES. 18:3261-3270(1990).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 91103879.
 RA BLUM S., FORSDYKE R.E., FORSDYKE D.R.;
 RT "Three human homologs of a murine gene encoding an inhibitor of stem
 cell proliferation.";
 RL DNA CELL BIOL. 9:589-602(1990).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 90287155.
 RA NAKAO M., NOMIYAMA H., SHIMADA K.;
 RT "Structures of human genes coding for cytokine LD78 and their
 expression.";
 RL MOL. CELL. BIOL. 10:3646-3658(1990).
 CC -!- SIMILARITY: 464.1 AND 464.2 ARE VERY CLOSELY RELATED.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 C-C) (CHEMOKINE CC).
 CC
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 CC
 DR EMBL; X52149; G296666; -
 DR EMBL; M24110; G182849; -
 DR EMBL; D90145; G219908; -
 DR PIR; B30908; B30908.
 DR PIR; B30412; B30412.
 DR PIR; B35673; B35673.
 DR PIR; S10157; S10157.
 DR MIM; 601395; -
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.

DR PFAM; PF00048; i18; 1.
 DR HSSP; P13236; 1HUN.
 KW CYTOKINE; CHEMOTAXIS; SIGNAL.
 FT SIGNAL 1 23
 FT CHAIN 24 93
 FT DISULFID 34 58
 FT DISULFID 35 74
 FT DISULFID 35 74
 SQ SEQUENCE 93 AA; 10161 MW; 21EDB04 CRC32;

Query Match 94.5%; Score 86; DB 1; Length 93;
 Best Local Similarity 91.7%; Pred. No. 4.59e-07;
 Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 72 QVCADPSEWVQ 83
 QY 1 QVCADPSEWVQ 12

RESULT 5
 ID M1A_RAT STANDARD; PRT; 92 AA.
 AC P50229;
 DT 01-OCT-1996 (REL. 34, CREATED)
 DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
 DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
 DE MACROPHAGE INFLAMMATORY PROTEIN 1-ALPHA PRECURSOR (MIP-1-ALPHA).
 GN SCYA3 OR MIP1A.
 OS RATTUS NORVEGICUS (RAT).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN-CD-1; TISSUE=LUNG;
 RX MEDLINE; 95298037.
 RA SHI M.M., GODLESKI J.J., PAULAKUSIS J.D.;
 RT "Molecular cloning and posttranscriptional regulation of macrophage
 inflammatory protein-1 alpha in alveolar macrophages.";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 211:289-295(1995).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC STRAIN=LONG EVANS; TISSUE=LUNG;
 RX MEDLINE; 95238980.
 RA SHANLEY T.P., SCHMAL H., FRIEDL H.P., JONES M.L., WARD P.A.;
 RT "Role of macrophage inflammatory protein-1 alpha (MIP-1 alpha) in
 acute lung injury in rats.";
 RL J. IMMUNOL. 154:4793-4802(1995).
 RN [3]
 RP SEQUENCE OF 24-57.
 RC STRAIN=WISTAR;
 RX MEDLINE; 96183056.
 RA NAKAGAWA H., SHIOTA S., TAKANO K., SHIBATA F., KATO H.;
 RT "Cytokine-induced neutrophil chemoattractant (CINC)-2 alpha, a novel
 member of rat GRO/CINC, is a predominant chemokine produced by
 lipopolysaccharide-stimulated rat macrophages in culture.";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 220:945-948(1996).
 CC -1- FUNCTION: MONOKINE WITH INFLAMMATORY AND CHEMOKINETIC PROPERTIES.
 CC HAS CHEMOTACTIC ACTIVITY FOR MONOCYTES, NEUTROPHILS, EOSINOPHILS,
 CC BASOPHILS, AND LYMPHOCYTES. REQUIRED FOR LUNG TNF-ALPHA
 CC PRODUCTION, NEUTROPHIL RECRUITMENT AND SUBSEQUENT LUNG INJURY AND
 CC MAY FUNCTION AS AN AUTOCRINE MEDIATOR FOR THE MACROPHAGE
 CC PRODUCTION OF TNF-ALPHA WHICH IN TURN UP-REGULATES VASCULAR
 CC ADHESION MOLECULES REQUIRED FOR NEUTROPHIL INFILX. THIS PROTEIN
 CC BINDS HEPARIN.
 CC -1- INDUCTION: BY LIPOPOLYSACCHARIDE (LPS).
 CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC
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CC EMBL; U22414; G790633; -.
 DR EMBL; U06435; G459150; -.
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSSP; P13236; 1HUN.
 KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL; HEPARIN-BINDING.
 FT SIGNAL 1 23
 FT CHAIN 24 92
 FT DISULFID 34 57
 FT DISULFID 35 73
 FT DISULFID 35 73
 FT CONFLICT 6 6
 FT CONFLICT 57 57
 FT CONFLICT 57 57
 SQ SEQUENCE 92 AA; 10335 MW; F48CF89F CRC32;

Query Match 90.1%; Score 82; DB 1; Length 92;
 Best Local Similarity 75.0%; Pred. No. 4.04e-06;
 Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 71 QICADPKETWVQ 82
 QY 1 QVCADPSEWVQ 12

RESULT 6
 ID M1B_RAT STANDARD; PRT; 92 AA.
 AC P50230;
 DT 01-OCT-1996 (REL. 34, CREATED)
 DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
 DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
 DE MACROPHAGE INFLAMMATORY PROTEIN 1-BETA PRECURSOR (MIP-1-BETA).
 GN SCYA4 OR MIP1B.
 OS RATTUS NORVEGICUS (RAT).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=LONG EVANS; TISSUE=LUNG;
 RA JONES M.L., SHANLEY T.P., SCHMAL H., FRIEDL H.P., WARD P.A.;
 RL SUBMITTED (FEB-1994) TO EMBL/GENBANK/DBJ DATA BANKS.
 CC -1- FUNCTION: MONOKINE WITH INFLAMMATORY AND CHEMOKINETIC PROPERTIES.
 CC -1- SUBUNIT: HOMODIMER (BY SIMILARITY).
 CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC
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DR EMBL; U06434; G459148; -.
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSSP; P13236; 1HUN.
 KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 FT SIGNAL 1 23
 FT CHAIN 24 92
 FT DISULFID 34 58
 FT DISULFID 35 74
 FT DISULFID 35 74
 SQ SEQUENCE 92 AA; 10234 MW; 3C82B006 CRC32;

Query Match 86.8%; Score 79; DB 1; Length 92;
 Best Local Similarity 81.8%; Pred. No. 2.01e-05;
 Matches 9; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 72 QICADPSEWVQ 82
 QY 1 QVCADPSEWVQ 11

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RESULT 7
ID MCP1_CAVPO STANDARD; PRT; 120 AA.
AC Q08782;
DT 01-NOV-1995 (REL. 32, CREATED)
DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1) (MONOCYTE
DE CHEMOATTRACTANT PROTEIN-1).
GN SCYA2 OR MCP1.
OS CAVIA PORCELLUS (GUINEA PIG).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; HYSTRICOGNATHI; CAVIIDAE; CAVIA.
RN [1]
RN SEQUENCE FROM N.A.
RC STRAIN-Z; TISSUE=SPLEEN;
RX MEDLINE; 93267104.
RA YOSHIMURA T.;
RT "cDNA cloning of guinea pig monocyte chemoattractant protein-1 and
RT expression of the recombinant protein.";
RL J. IMMUNOL. 150:5025-5032(1993).
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
CC NEUTROPHILS.
CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC -----
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CC or send an email to license@isb-sib.ch).
CC -----
CC EMBL; L04985; G349821; -.
CC DR EMBL; M35590; G199697; -.
CC DR EMBL; X62502; G53127; -.
CC DR PIR; C30552; C30552.
CC DR PIR; JLO088; JLO088.
CC DR MGD; MGI:98261; SCYA4.
CC DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
CC DR PFAM; PF00048; i18; 1.
CC DR HSP; P80098; INCV.
CC KW CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE; GLYCOPROTEIN.
CC FT SIGNAL 1 23 BY SIMILARITY.
CC FT CHAIN 24 120 MONOCYTE CHEMOTACTIC PROTEIN 1.
CC FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
CC SIMILARITY).
CC FT DISULFID 33 57 BY SIMILARITY.
CC FT DISULFID 34 73 BY SIMILARITY.
CC FT CARBOHYD 97 97 POTENTIAL.
CC SQ SEQUENCE 120 AA; 13741 MW; 22FAD257 CRC32;

Query Match 84.6%; Score 77; DB 1; Length 120;
Best Local Similarity 66.7%; Pred. No. 5,79e-05;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 71 EVCADPTQKWVQ 82
Qy 1 QVCADPSESQVQ 12
:||||:|

RESULT 8
ID M1B_MOUSE STANDARD; PRT; 92 AA.
AC P14097;
DT 01-JAN-1990 (REL. 13, CREATED)
DT 01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MACROPHAGE INFLAMMATORY PROTEIN 1-BETA PRECURSOR (MIP-1-BETA) (H400
DE PROTEIN) (SIS-GAMMA) (ACT2).
GN SCYA4 OR MIP1B.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RN SEQUENCE FROM N.A.
RC MEDLINE; 89067830.
RX SHERRY B.; TEKAMP-OLSON P.; GALLEGOS C.; BAUER D.; DAVATELIS G.,

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RA WOLPE S.D.; MASIAZ F.; COIT D.; CERAMI A.;
RT "Resolution of the two components of macrophage inflammatory protein
RT 1, and cloning and characterization of one of those components,
RT macrophage inflammatory protein 1 beta.";
RL J. EXP. MED. 168:2251-2259(1988).
RN [2]
RN SEQUENCE FROM N.A.
RX MEDLINE; 89093958.
RA BROWN K.D.; ZURAWSKI S.M.; MOSMANN T.R.; ZURAWSKI G.;
RT "A family of small inducible proteins secreted by leukocytes are
RT members of a new superfamily that includes leukocyte and
RT fibroblast-derived inflammatory agents, growth factors, and
RT indicators of various activation processes.";
RL J. IMMUNOL. 142:679-687(1989).
RN [3]
RN SEQUENCE FROM N.A.
RC STRAIN-DBA/2J; TISSUE=LIVER;
RA DAUBERSIES P.; LEPRETRE F.; BAILLEUL B.; GROVE M.; PRAGNELL I.;
RA PLUMB M.A.;
RL SUBMITTED (OCT-1991) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -!- FUNCTION: MONOKINE WITH INFLAMMATORY AND CHEMOKINETIC PROPERTIES.
CC -!- SUBUNIT: HOMODIMER (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC -----
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CC -----
CC EMBL; M23503; G533245; -.
CC DR EMBL; M35590; G199697; -.
CC DR EMBL; X62502; G53127; -.
CC DR PIR; C30552; C30552.
CC DR PIR; JLO088; JLO088.
CC DR MGD; MGI:98261; SCYA4.
CC DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
CC DR PFAM; PF00048; i18; 1.
CC DR HSP; P13236; IHUN.
CC KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
CC FT SIGNAL 1 23 MACROPHAGE INFLAMMATORY PROTEIN 1-BETA.
CC FT CHAIN 24 92 BY SIMILARITY.
CC FT DISULFID 34 58 BY SIMILARITY.
CC FT DISULFID 35 74 BY SIMILARITY.
CC FT CONFLICT 75 75 A -> P (IN REF. 1).
CC FT CONFLICT 79 79 E -> Q (IN REF. 1).
CC FT CONFLICT 88 88 D -> H (IN REF. 1).
CC SQ SEQUENCE 92 AA; 10168 MW; C543B91F CRC32;

Query Match 83.5%; Score 76; DB 1; Length 92;
Best Local Similarity 72.7%; Pred. No. 9,78e-05;
Matches 8; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 72 QICANPSEPVW 82
Qy 1 QVCADPSESQV 11
:||||:|

RESULT 9
ID M1A_MOUSE STANDARD; PRT; 92 AA.
AC P10855; P14096;
DT 01-JUL-1989 (REL. 11, CREATED)
DT 01-APR-1990 (REL. 14, LAST SEQUENCE UPDATE)
DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
DE MACROPHAGE INFLAMMATORY PROTEIN 1-ALPHA PRECURSOR (MIP-1-ALPHA) (TY-5)
DE (SIS-ALPHA) (HEPARIN-BINDING CHEMOTAXIS PROTEIN) (L2G25B).
GN SCYA3 OR MIP1A.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; MUS.

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RX TISSUE-PETAL:
 RX MEDLINE: 97341179
 RA BERKHOUT T.A., SRAPE H.M., MOORES K., WHITE J.R., ELSHOUBAGY N.,
 RA APPELBAUM E., REAPE T.J., BRANNER M., MAKWANA J., FOLEY J.J.,
 RA SCHMIDT D.B., IMBURGIA C., MACNULTY D., MATTHEWS J., O'DONNELL K.,
 RA O'SHANNESSEY D., SCOTT M., GROOT P.H.E., MACPHEE C.;
 RT "Cloning, in vitro expression, and functional characterization of a
 RT novel human CC chemokine of the monocyte chemotactic protein (MCP)
 RT receptor 2B.";
 RT J. BIOL. CHEM. 272:16404-16413(1997).
 RL [4]
 RN SEQUENCE FROM N.A.
 RP DANTE M., GIBSON A.;
 RA SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [5]
 RN SEQUENCE FROM N.A.
 RP TISSUE-LUNG;
 RA POWER C.A., MEYER A., RISON S.C.G., GUYE-COULIN F., WELLS T.N.C.;
 RL SUBMITTED (DEC-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, LYMPHOCYTES,
 CC BASOPHILS AND EOSINOPHILS, BUT NOT NEUTROPHILS. SIGNALS THROUGH
 CC CCR2B AND CCR3 RECEPTORS. PLAYS A ROLE IN THE ACCUMULATION OF
 CC LEUKOCYTES AT BOTH SIDES OF ALLERGIC AND NONALLERGIC INFLAMMATION.
 CC MAY BE INVOLVED IN THE RECRUITMENT OF MONOCYTES INTO THE ARTERIAL
 CC WALL DURING THE DISEASE PROCESS OF ARTERIOSCLEROSIS. MAY PLAY A
 CC ROLE IN THE MONOCYTE ATTRACTION IN TISSUES CHRONICALLY EXPOSED TO
 CC EXOGENOUS PATHOGENS.
 CC -!- MASS SPECTROMETRY: MW=9314; MW_ERR=30; METHOD=MALDI; RANGE=17-98.
 CC -!- MASS SPECTROMETRY: MW=8760; MW_ERR=30; METHOD=MALDI; RANGE=22-98.
 CC -!- MASS SPECTROMETRY: MW=8575; MW_ERR=30; METHOD=MALDI; RANGE=24-98.
 CC -!- INDUCTION: BY INTERLEUKIN-1 AND TNF-ALPHA.
 CC -!- TISSUE SPECIFICITY: WIDELY EXPRESSED. FOUND IN SMALL INTESTINE,
 CC THYMUS, COLON, LUNG, TRACHEA, STOMACH AND LYMPH NODE. LOW LEVELS
 CC SEEN IN THE PULMONARY ARTERY SMOOTH MUSCLE CELLS.
 CC -!- THIS PROTEIN CAN BIND HEPARIN.
 CC -!- PTM: ONE MAJOR ISOFORM MCP-4, AND TWO MINOR ISOFORMS (LA)MCP-4 AND
 CC (FNPGLA)MCP-4 ARE PRODUCED BY DIFFERENTIAL SIGNAL CLEAVAGE.
 CC (LA)MCP-4 IS ABOUT 30 FOLD LESS ACTIVE THAN MCP-4.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC -----
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 CC use by non-profit institutions as long as its content is in no way
 CC modified and this statement is not removed. Usage by and for commercial
 CC entities requires a license agreement (see <http://www.isb-sib.ch/announce/>
 CC or send an email to license@isb-sib.ch).
 CC -----
 DR EMBL: U46767; G1732123;
 DR EMBL: AC002482; G2340091;
 DR EMBL: X98306; E248571;
 DR MIM: 601391;
 DR PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM: PF00048; i18; 1.
 DR HSP: P13500; IDOL.
 KW CYTOKINE; CHEMOTAXIS; SIGNAL; GLYCOPROTEIN; INFLAMMATORY RESPONSE.
 FT SIGNAL 1 23
 FT CHAIN 24 98 MONOCYTE CHEMOTACTIC PROTEIN 4.
 FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID.
 FT DISULFID 34 58 BY SIMILARITY.
 FT DISULFID 35 74 BY SIMILARITY.
 FT CARBOHYD 29 29 POTENTIAL.
 SQ SEQUENCE 98 AA; 10986 MW; DF52F6EC CRC32;
 Query Match 82.4%; Score 75; DB 1; Length 98;
 Best Local Similarity 66.7%; Pred. No. 1.65e-04;
 Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;
 Db 72 ETCADPKKWWQ 83
 QY 1 QVCADPSESWWQ 12

RESULT 11
 ID MCP3_HUMAN STANDARD; PRT; 99 AA.
 AC P00098; 1992 (REL. 24, CREATED)
 DT 01-DEC-1992 (REL. 32, LAST SEQUENCE UPDATE)
 DT 01-NOV-1995 (REL. 36, LAST ANNOTATION UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DE MONOCYTE CHEMOTACTIC PROTEIN 3 PRECURSOR (MCP-3) (MONOCYTE
 DE CHEMOATTRACTANT PROTEIN 3) (NC28).
 GN SCYA7 OR MCP3.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A., AND SEQUENCE OF 31-67 AND 71-99.
 RX MEDLINE: 93213290.
 RA OPDENAKKER G., FROYEN G., FITEN P., PROOST P., VAN DAMME J.;
 RT "Human monocyte chemotactic protein-3 (MCP-3): molecular cloning of
 RT the cDNA and comparison with other chemokines.";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 191:535-542(1993).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 94375065.
 RA OPDENAKKER G., FITEN P., NYS G., FROYEN G., VAN ROY N., SPELEMAN F.,
 RA LAUREYS G., VAN DAMME J.;
 RT "The human MCP-3 gene (SCYA7): cloning, sequence analysis, and
 RT assignment to the C-C chemokine gene cluster on chromosome
 RT 17q11.2-q12.";
 RL GENOMICS 21:403-408(1994).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE: 93305913.
 RA MINTY A., CHALON P., GUILLEMOT J.-C., KAGHAD M., LIAUZUN P.,
 RA MAGAZIN M., MILOUX B., MINTY C., RAMOND P., VITA N., LUPKER J.,
 RA SHIRE D., FERRARA P., CAPUT D.;
 RT "Molecular cloning of the MCP-3 chemokine gene and regulation of its
 RT expression.";
 RL EUR. CYTOKINE NETW. 4:99-110(1993).
 RN [4]
 RP SEQUENCE OF 30-99.
 RC TISSUE-OSTEOSARCOMA;
 RX MEDLINE: 92308855.
 RA VAN DAMME J., PROOST P., LENAERTS J.-P., OPDENAKKER G.;
 RT "Structural and functional identification of two human, tumor-derived
 RT monocyte chemotactic proteins (Mcp-2 and MCP-3) belonging to the
 RT chemokine family.";
 RL J. EXP. MED. 176:59-65(1992).
 RN [5]
 RP STRUCTURE BY NMR, AND SUBUNIT.
 RX MEDLINE: 97053697.
 RA KIM K.-S., RAJARATHNAM K., CLARK-LEWIS I., SYKES B.D.;
 RT "Structural characterization of a monomeric chemokine: monocyte
 RT chemoattractant protein-3.";
 RL FEBS LETT. 395:277-282(1996).
 RN [6]
 RP STRUCTURE BY NMR.
 RX MEDLINE: 97263733.
 RA MEUNIER S., BERNASSAU J.-M., GUILLEMOT J.-C., FERRARA P., DARBON H.;
 RT "Determination of the three-dimensional structure of CC chemokine
 RT monocyte chemoattractant protein 3 by 1H two-dimensional NMR
 RT spectroscopy.";
 RL BIOCHEMISTRY 36:4412-4422(1997).
 CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES AND
 CC EOSINOPHILS, BUT NOT NEUTROPHILS. AUGMENTS MONOCYTE ANTI-TUMOR
 CC ACTIVITY. ALSO INDUCES THE RELEASE OF GELATINASE B. THIS PROTEIN
 CC CAN BIND HEPARIN.
 CC -!- SUBUNIT: MONOMER.
 CC -!- PTM: O-GLYCOSYLATED.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC -----
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RL  SUBMITTED (MAY-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
RN  [3]
RP  SEQUENCE FROM N.A.
RC  TISSUE-PLACENTA;
RA  PARDIGOL A., MAEGERT H.-J., CIESLAK A., HILL O., SCHULZ-KNAPPE P.,
RA  FORSSMANN W.-G.;
RL  SUBMITTED (OCT-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
CC  INTRACELLULAR CA2+ CHANGES AND ENZYME RELEASE, BUT NO CHEMOTAXIS,
CC  RECEPTORS THAT ALSO RECOGNIZE MIP-1 ALPHA. IT INDUCED
CC  AT CONCENTRATIONS OF 100-1,000 NM, AND WAS INACTIVE ON T
CC  LYMPHOCYTES, NEUTROPHILS, AND EOSINOPHIL LEUKOCYTES. ENHANCES THE
CC  PROLIFERATION OF CD34 MYELOID PROGENITOR CELLS.
CC  TISSUE SPECIFICITY: EXPRESSED CONSTITUTIVELY IN SEVERAL NORMAL
CC  TISSUES: SPLEEN, LIVER, SKELETAL AND HEART MUSCLE, GUT, AND BONE
CC  MARROW. PRESENT AT HIGH CONCENTRATIONS (1-80 NM) IN PLASMA.
CC  -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC  C-C) (CHEMOKINE CC).
CC  -----
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CC  entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC  or send an email to license@isb-sib.ch).
CC  -----
CC  EMBL: Z49270; G1004269; -
CC  EMBL: Z70292; E233858; -
CC  EMBL: Z49269; G1004267; -
CC  MIM: 601392; -
CC  PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
CC  PFAM: PF00048; i18; 1.
CC  HSSP: P13236; 1HUN.
CC  CYTOKINE; SIGNAL.
KW  SIGNAL 1 19
FT  CHAIN 20 93 CHEMOKINE CC-1.
FT  DISULFID 35 59 BY SIMILARITY.
FT  DISULFID 36 75 BY SIMILARITY.
SQ  SEQUENCE 93 AA; 10678 MW; A3E7BCAD CRC32;

Query Match 80.2%; Score 73; DB 1; Length 93;
Best Local Similarity 63.6%; Pred. No. 4.63e-04;
Matches 7; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 74 VCTNPSDKWQ 84
QY 2 VCADPSESQWQ 12

RESULT 14
ID MCP2_PIG STANDARD; PRT; 99 AA.
AC P49873;
DT 01-OCT-1996 (REL. 34, CREATED)
DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 2 PRECURSOR (MCP-2) (MONOCYTE
DE CHEMOATTRACTANT PROTEIN 2).
GN SC2A8 OR MCP2.
OS SUS SCROFA (FIG).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC ARTIODACTYLA; SUIFORMES; SUINA; SUIDAE; SUS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE: 95091716.
RA HOSANG K.K., KNOKE I.I., KLAUDINY J.J., WEMPE F.F., WUTTKE W.W.,
RA SCHEIT K.K.;
RT "porcine luteal cells express monocyte chemoattractant protein-2
RL (MCP-2): analysis by cDNA cloning and northern analysis.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 205:148-153(1994).
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES. THIS PROTEIN
CC CAN BIND HEPARIN.
CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).

SUBMITTED (MAY-1996) TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
C-C) (CHEMOKINE CC).
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-----
EMBL: Z48480; G683719; -
PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
PFAM: PF00048; i18; 1.
HSSP: P80098; 1NCV.
CYTOKINE; CHEMOTAXIS; SIGNAL; HEPARIN-BINDING; INFLAMMATORY RESPONSE.
KW SIGNAL 1 23 BY SIMILARITY.
FT CHAIN 24 99 MONOCYTE CHEMOTACTIC PROTEIN 2.
FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
SIMILARITY).
FT DISULFID 34 59 BY SIMILARITY.
FT DISULFID 35 75 BY SIMILARITY.
SQ SEQUENCE 99 AA; 10903 MW; B7620BCF CRC32;

Query Match 80.2%; Score 73; DB 1; Length 99;
Best Local Similarity 66.7%; Pred. No. 4.63e-04;
Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 73 EVCADPOQKWQ 84
QY 1 QVCADPSESQWQ 12

RESULT 15
ID CCC3_HUMAN STANDARD; PRT; 109 AA.
AC Q13954;
DT 01-NOV-1997 (REL. 35, CREATED)
DT 01-NOV-1997 (REL. 35, LAST SEQUENCE UPDATE)
DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
DE CHEMOKINE CC-3 PRECURSOR (HCC-3).
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=LIVER.
RA PARDIGOL A., MAEGERT H.-J., ZUCHT H.D., FORSSMANN W.-G.,
RA SCHULZ-KNAPPE P.;
RL SUBMITTED (MAY-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC -----
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CC or send an email to license@isb-sib.ch).
CC -----
EMBL: Z70293; E233858; -
DR PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM: PF00048; i18; 1.
DR HSSP: P13236; 1HUN.
KW CYTOKINE; SIGNAL.
FT SIGNAL 1 2 POTENTIAL.
FT CHAIN 7 109 CHEMOKINE CC-3.
FT DISULFID 51 75 BY SIMILARITY.
FT DISULFID 52 91 BY SIMILARITY.
SQ SEQUENCE 109 AA; 12297 MW; 9AE90F93 CRC32;

Query Match 80.2%; Score 73; DB 1; Length 109;
Best Local Similarity 63.6%; Pred. No. 4.63e-04;

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Matches 7; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 90 VCTNPSDKWVQ 100

||:|:|

Qy 2 VCADPSESQVQ 12

Search completed: Fri Feb 4 17:33:42 2000
Job time : 7 secs.

 [W][A][T][E][R][M][A][N]
 [S][E][R][U][M]
 [P][R][O][T][E][I][N]
 [A][L][I][G][N][M][E][N][T]
 [T][M]

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Mpsrch_pp protein - protein database search, using Smith-Waterman algorithm
 Run on: Fri Feb 4 17:32:46 2000; MasPar time 3.59 Seconds
 Tabular output not generated. 133.926 Million cell updates/sec

Title: >US-09-150-813-44
 Description: (1-12) from US09150813.pep
 Perfect Score: 91
 Sequence: 1 QVCADPSESVMQ 12

Scoring table: PAM 150
 Gap 15

Searched: 122810 seqs, 40068593 residues

Post-processing: Minimum Match 0%
 Listing first 45 summaries

Database: pir60
 1:pir1 2:pir2 3:pir3 4:pir4

Statistics: Mean 24.455; Variance 36.695; scale 0.666

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description	Pred. No.
1	91	100.0	50	2	C60407 monocyte adherence-in	4.73e-07
2	91	100.0	92	1	A31767 macrophage inflammato	4.73e-07
3	88	96.7	92	2	I46730 immune activation gen	2.11e-06
4	86	94.5	92	2	A30574 macrophage inflammato	5.68e-06
5	86	94.5	93	2	B35673 LD78-beta protein pre	5.68e-06
6	82	90.1	92	2	I52322 macrophage inflammato	4.01e-05
7	77	84.6	120	2	I48147 monocyte chemoattract	4.39e-04
8	76	83.5	92	2	C30552 macrophage inflammato	7.04e-04
9	75	82.4	92	2	A32393 macrophage inflammato	1.13e-03
10	75	82.4	109	2	A54678 monocyte chemotactic	1.13e-03
11	74	81.3	120	2	JE0177 lymphocyte and monocy	1.80e-03
12	73	80.2	99	2	JC2417 monocyte chemoattract	2.85e-03
13	72	79.1	99	2	A60299 monocyte chemoattract	4.53e-03
14	71	78.0	91	1	A46539 monocyte chemoattract	7.16e-03
15	71	78.0	99	2	JC5295 monocyte chemotactic	7.16e-03
16	71	78.0	99	2	JC2136 monocyte chemoattract	7.16e-03
17	70	76.9	95	2	JN0841 interleukin-8 - dog	1.13e-02
18	70	76.9	101	2	I46997 interleukin-8 - sheep	1.13e-02
19	70	76.9	101	2	S42496 interleukin-8 - sheep	1.13e-02
20	70	76.9	103	2	A53096 interleukin-8 precurs	1.13e-02
21	70	76.9	103	2	A44253 alveolar macrophage c	1.13e-02
22	70	76.9	148	2	A30209 PDGF-inducible JE gly	1.13e-02
23	70	76.9	148	2	S07723 immediate-early serum	1.13e-02

ALIGNMENTS

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RESULT      1
ENTRY       C60407      #type fragment
TITLE       monocyte adherence-induced protein 5 beta - human (fragment)
ORGANISM    #formal_name Homo sapiens #common_name man
DATE        06-Nov-1992 #sequence_revision 06-Nov-1992 #text_change
              03-May-1996

ACCESSIONS  C60407
REFERENCE   A60407
            Sporn, S.A.; Eierman, D.F.; Johnson, C.E.; Morris, J.;
            Martin, G.; Ladner, M.; Haskill, S.
            J. Immunol. (1990) 144:4434-4441
            Monocyte adherence results in selective induction of novel
            genes sharing homology with mediators of inflammation and
            tissue repair.
            #cross-references MUID:90257367
            #accession      C60407
            #status        preliminary: not compared with conceptual translation
            #molecule_type mRNA
            #residues       1-50 #label SPO
CLASSIFICATION #superfamily macrophage inflammatory protein
SUMMARY       #length 50 #checksum 9927

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Query Match      100.0%; Score 91; DB 2; Length 50;
Best Local Similarity 100.0%; Pred. No. 4.73e-07;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db      30 QVCADPSESVMQ 41
QY      1 QVCADPSESVMQ 12

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RESULT      2
ENTRY       A31767      #type complete
TITLE       macrophage inflammatory protein 1-beta precursor - human
ALTERNATE_NAMES cytokine HC21; G-26 protein; H400 homolog; lymphocyte
                  activation gene 1 protein (LAG-1); MIP-1beta; PAT744; SCVA2
                  protein (misidentification); SIS gamma homolog; T-cell
                  activation protein 2 (Act-2); T-cell activation protein
                  gamma
ORGANISM     #formal_name Homo sapiens #common_name man
DATE        07-Jun-1990 #sequence_revision 29-May-1998 #text_change
              29-May-1998
ACCESSIONS  JH0319; A40978; A31767; A37411; B30574; B45817; D30552
REFERENCE   JH0319
            Balxeras, E.; Roman-Roman, S.; Jitsukawa, S.; Genevee, C.;
            Mechiche, S.; Viegas-Pequignot, E.; Hercend, T.; Triebel,
            F.

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transformation-induce 1.78e-02
rsv-induced protein - 1.78e-02
gene C10 protein - mo 1.78e-02
monocyte chemoattract 1.78e-02
monocyte chemoattract 2.78e-02
monocyte chemoattract 2.78e-02
eotaxin precursor - h 6.79e-02
interleukin-8 precurs 6.79e-02
monocyte chemoattract 1.05e-01
eotaxin precursor - r 1.05e-01
eotaxin precursor - g 1.05e-01
interleukin-8 - rabbl 1.63e-01
lymphotactin precursor 1.63e-01
interleukin-8 homolog 2.52e-01
pre-B-cell growth-sti 2.52e-01
cytokine - mouse 2.52e-01
cytokine SDF-1-beta - 2.52e-01
Neutrophil attractant 5.93e-01
lymphotactin precursor 1.38e+00
lrp protein - human 2.08e+00
hypothetical protein 3.14e+00
brain-specific serine 3.14e+00

```

```

#journal Mol. Immunol. (1990) 27:1091-1102
#title Cloning and expression of a lymphocyte activation gene
#accession (LAG-1).
#cross-references MUID:91061800
#status translation not shown
#molecule_type DNA
#residues 1-92 ##label BAI
#cross-references GB:X53682; NID:g34217; PID:g34218
#experimental_source natural killer cell, strain CD3-CD2+, F5, 5IIE5
REFERENCE
#authors Napolitano, M.; Modi, W.S.; Cevario, S.J.; Gnarra, J.R.;
Seanez, H.N.; Leonard, W.J.
#journal J. Biol. Chem. (1991) 266:17531-17536
#title The gene encoding the Act-2 cytokine. Genomic structure,
HTLV-I/tax responsiveness of 5' upstream sequences, and
chromosomal localization.
#cross-references MUID:91373378
#accession A40978
#molecule_type DNA
#residues 1-14,'S',16-69,'G',71-92 ##label NAP
#cross-references GB:M69201; NID:g178021
#note 15-Ala was also found
REFERENCE
#authors Lipes, M.A.; Napolitano, M.; Jeang, K.T.; Chang, N.T.;
Leonard, W.J.
#journal Proc. Natl. Acad. Sci. U.S.A. (1988) 85:9704-9708
#title Identification, cloning, and characterization of an immune
activation gene.
#cross-references MUID:89071764
#accession A31767
#molecule_type mRNA
#residues 1-92 ##label LIP
#cross-references GB:J04130; NID:g178017; PID:g178018
REFERENCE
#authors Chang, H.C.; Reinherz, E.L.
#journal Eur. J. Immunol. (1989) 19:1045-1051
#title Isolation and characterization of a cDNA encoding a putative
cytokine which is induced by stimulation via the CD2
structure on human T lymphocytes.
#cross-references MUID:89325421
#accession A37411
#molecule_type mRNA
#residues 1-92 ##label CHA
#cross-references GB:X16166; NID:g32035; PID:g32036
REFERENCE
#authors Zipfel, P.F.; Balke, J.; Irving, S.G.; Kelly, K.; Siebenlist,
U.
#journal J. Immunol. (1989) 142:1582-1590
#title Mitogenic activation of human T cells induces two closely
related genes which share structural similarities with a
new family of secreted factors.
#cross-references MUID:89140347
#accession B30574
#molecule_type mRNA
#residues 1-19,'L',21-92 ##label ZIP
#cross-references GB:M25316; NID:g602434; PID:g602455
REFERENCE
#authors Miller, M.D.; Hata, S.; Malefyt, R.D.W.; Krangel, M.S.
#journal J. Immunol. (1989) 143:2907-2916
#title A novel polypeptide secreted by activated human T
lymphocytes.
#cross-references MUID:90038522
#accession B45817
#molecule_type mRNA
#residues 7-55,'I',57-79,'T',81-92 ##label MIL
#cross-references GB:M57503; NID:g339726; PID:g339727
REFERENCE
#authors Brown, K.D.; Zurawski, S.M.; Mosmann, T.R.; Zurawski, G.
#journal J. Immunol. (1989) 142:679-687
#title A family of small inducible proteins secreted by leukocytes
are members of a new superfamily that includes leukocyte
and fibroblast-derived inflammatory agents, growth factors,

```

```

#cross-references MUID:89093958
#accession D30552
#molecule_type mRNA
#residues 1-39,'REASS',46-92 ##label BRO
#cross-references GB:M23502; NID:g533212; PID:g533213
REFERENCE
#authors Clore, G.M.; Lodi, P.J.; Garrett, D.S.; Gronenborn, A.M.
#submission submitted to the Brookhaven Protein Data Bank, January 1994
#cross-references PDB:1HUM
#contents annotation; conformation and disulfide bond assignments by
(1)H-NMR, residues 24-92
COMMENT This protein is secreted by activated lymphocytes and monocytes. It
is bound by chemokine (C-C) receptor 5 (see PIR:A43113) and
receptor 1 (see PIR:A45177).
GENETICS
#gene GDB:LAG1
#cross-references GDB:127451; OMIM:153335
#map_position 17q21-17q21
#introns 26/1; 64/2
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS chemotaxis; cytokine; inflammation
FEATURE
1-23 #domain signal sequence #status predicted #label StC\
24-92 #product macrophage inflammatory protein 1-beta #status
experimental #label MAT\
34-58,35-74 #disulfide_bonds #status experimental
SUMMARY #length 92 #molecular-weight 10212 #checksum 7597
Query Match 100.0%; Score 91; DB 1; Length 92;
Best Local Similarity 100.0%; Pred. No. 4.73e-07;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Db 72 QVCADPSESQVQ 83
| | | | | | | | | |
Qy 1 QVCADPSESQVQ 12
RESULT 3
ENTRY #type complete
TITLE immune activation gene 2 - rabbit
ORGANISM #formal_name Oryctolagus cuniculus #common_name domestic
rabbit
DATE 14-Feb-1997 #sequence_revision 14-Feb-1997 #text_change
09-May-1997
ACCESSION I46730
REFERENCE I46730
#authors Mori, S.; Goto, K.; Goto, F.; Mutakami, K.; Ohkawara, S.;
Yoshinaga, M.
#journal Int. Immunol. (1994) 6:149-156
#title Dynamic changes in mRNA expression of neutrophils during the
course of acute inflammation in rabbits.
#cross-references MUID:94198229
#accession I46730
#status preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-92 ##label MOR
#cross-references GB:D17402; NID:g599577; PID:g599578
CLASSIFICATION #superfamily macrophage inflammatory protein
SUMMARY #length 92 #molecular-weight 10066 #checksum 5637
Query Match 96.7%; Score 88; DB 2; Length 92;
Best Local Similarity 91.7%; Pred. No. 2.11e-06;
Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 72 QVCANPSESQVQ 83
| | | | | | | | | |
Qy 1 QVCADPSESQVQ 12
RESULT 4
ENTRY #type complete
TITLE macrophage inflammatory protein 1-alpha precursor - human

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ALTERNATE_NAMES LD78-alpha protein precursor; lymphocyte tumor
promoter-induced protein; macrophage inflammatory protein
homolog GOS19-1; Mip-1alpha; PAR464; small inducible
cytokine A3; T-cell activation protein 1
ORGANISM #formal_name Homo sapiens #common_name man
DATE 03-Aug-1992 #sequence_revision 03-Aug-1992 #text_change
29-May-1998
ACCESSIONS A35673; A30574; A30412; A24198; A30908
REFERENCE #authors Nakao, M.; Nomiya, H.; Shimada, K.
#journal Mol. Cell. Biol. (1990) 10:3646-3658
#title Structures of human genes coding for cytokine LD78 and their
expression.
#cross-references MUID:90287155
#accession A35673
#molecule_type DNA
#residues 1-92 #label NAK
##cross-references GB:D90144; NID:g219905; PID:d1014875; PID:g219906
REFERENCE A30574
#authors Zipfel, P.F.; Balke, J.; Irving, S.G.; Kelly, K.; Siebenlist,
U.
#journal J. Immunol. (1989) 142:1582-1590
#title Mitogenic activation of human T cells induces two closely
related genes which share structural similarities with a
new family of secreted factors.
#cross-references MUID:89140347
#accession A30574
#molecule_type mRNA
#residues 1-92 #label ZIP
##cross-references GB:M25315; NID:g602452; PID:g602453
REFERENCE A30412
#authors Blum, S.; Forsdyke, R.E.; Forsdyke, D.R.
#journal DNA Cell Biol. (1990) 9:589-602
#title Three human homologs of a murine gene encoding an inhibitor
of stem cell proliferation.
#cross-references MUID:91103879
#accession A30412
#molecule_type mRNA
#residues 1-92 #label BLU
##cross-references GB:M25315; NID:g602452; PID:g602453
REFERENCE A30412
#authors Charru, K.; Fukuda, M.; Maeda, S.; Shimada, K.
#journal J. Biochem. (1986) 99:885-894
#title A cDNA clone used to study mRNA inducible in human tonsillar
lymphocytes by a tumor promoter.
#cross-references MUID:86223879
#accession A24198
#status preliminary
#molecule_type mRNA
#residues 1-92 #label OBA
GENETICS
#gene GDB:SCVA3
#map_position 17q11-17q21
#introns 26/1; 64/2
CLASSIFICATION #superfamily macrophage inflammatory protein
FEATURE
1-20 #domain signal sequence #status predicted #label SIG\
21-92 #product macrophage inflammatory protein 1-alpha #status
predicted #label MAT\
33-57,34-73 #disulfide_bonds #status predicted
SUMMARY #length 92 #molecular_weight 10085 #checksum 4316
Query Match 94.5%; Score 86; DB 2: Length 92;
Best Local Similarity 91.7%; Pred. No. 5.88e-06;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Db 71 QVCADPSEEWQ 82
QY 1 QVCADPSEEWQ 12
RESULT 5
ENTRY #type complete
TITLE LD78-beta protein precursor - human

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ALTERNATE_NAMES macrophage inflammatory protein homolog GOS19-2; small
inducible cytokine A4
ORGANISM #formal_name Homo sapiens #common_name man
DATE 28-Sep-1990 #sequence_revision 28-Sep-1990 #text_change
24-Sep-1998
ACCESSIONS B35673; B30412; S10157; B30908
REFERENCE #authors Nakao, M.; Nomiya, H.; Shimada, K.
#journal Mol. Cell. Biol. (1990) 10:3646-3658
#title Structures of human genes coding for cytokine LD78 and their
expression.
#cross-references MUID:90287155
#accession B35673
#molecule_type DNA
#residues 1-93 #label NAK
##cross-references GB:D90145; NID:g219907; PID:d1014876; PID:g219908
REFERENCE A30412
#authors Blum, S.; Forsdyke, R.E.; Forsdyke, D.R.
#journal DNA Cell Biol. (1990) 9:589-602
#title Three human homologs of a murine gene encoding an inhibitor
of stem cell proliferation.
#cross-references MUID:91103879
#accession B30412
#status preliminary; not compared with conceptual translation
#molecule_type DNA
#residues 1-93 #label BLU
##cross-references GB:M24110; GB:M32338; NID:g182848; PID:g182849
REFERENCE S10157
#authors Irving, S.G.; Zipfel, P.F.; Balke, J.; McBride, O.W.; Morton,
C.C.; Burd, P.R.; Siebenlist, U.; Kelly, K.
#journal Nucleic Acids Res. (1990) 18:3261-3270
#title Two inflammatory mediator cytokine genes are closely linked
and variably amplified on chromosome 17q.
#cross-references MUID:90287702
#accession S10157
#status preliminary
#molecule_type mRNA
#residues 1-93 #label IRV
##cross-references EMBL:X52149; NID:g34750; PID:g296666
COMMENT This protein is a member of a "small inducible" or "activation
specific" gene family, is likely to be an early-acting
interleukin, and is the product of a putative G0/G1 switch gene.
GENETICS
#gene GDB:SCYA4
#map_position 17q11-17q21
#introns 26/1; 64/2
CLASSIFICATION #superfamily macrophage inflammatory protein
cytokine
FEATURE
1-22 #domain signal sequence #status predicted #label SIG\
23-93 #product LD78-beta protein #status predicted #label MAT\
SUMMARY #length 93 #molecular_weight 10161 #checksum 7784
Query Match 94.5%; Score 86; DB 2: Length 93;
Best Local Similarity 91.7%; Pred. No. 5.68e-06;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Db 72 QVCADPSEEWQ 83
QY 1 QVCADPSEEWQ 12
RESULT 6
ENTRY #type complete
TITLE macrophage inflammatory protein-1alpha - rat
ORGANISM #formal_name Rattus norvegicus #common_name Norway rat
DATE 29-May-1998 #sequence_revision 29-May-1998 #text_change
02-Jul-1998
ACCESSIONS I52322
REFERENCE I52322
#authors Shi, M.M.; Godleski, J.J.; Paulauskis, J.D.

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##cross-references GB:M23503; NID:953244; PID:g533245
REFERENCE
#journal JI0088
#authors Sherry, B.; Tekamp-Olson, P.; Gallegos, C.; Bauer, D.; Davatelis, G.; Wolpe, S.D.; Masiarz, F.; Colt, D.; Cerami, A.
#journal J. Exp. Med. (1988) 168:2251-2259
#title Resolution of the two components of macrophage inflammatory protein 1, and cloning and characterization of one of those components, macrophage inflammatory protein 1 beta.
#cross-references MUID:89067830
#accession JI0088
#molecule_type mRNA
#residues 1-92 #label SHE
#cross-references GB:M35590; NID:g199696; PID:g199697
#accession PS0304
#molecule_type protein
#residues 24-33, 'XX', '36', 'X', '38 #label SH2
REFERENCE
#journal S22042
#authors Daubersies, P.; Lepretre, F.; Bailleur, B.; Grove, M.; Pragnell, I.; Plumb, M.
#submission Submitted to the EMBL Data Library, October 1991
#description Sequence of the murine macrophage inflammatory protein 1b gene.
#accession S22042
#status preliminary
#molecule_type DNA
#residues 1-92 #label DAU
#cross-references EMBL:X62502; NID:g53126; PID:g53127
COMMENT This protein is a monokine.
GENETICS
#introns 26/1; 64/2
#superfamily macrophage inflammatory protein glycoprotein
CLASSIFICATION
#domain signal sequence #status predicted #label SIG\
KEYWORDS #product macrophage inflammatory protein 1-beta #status
1-23 experimental #label MAT\
24-92 #binding_site carbohydrate (asn) (covalent) #status
76 predicted
SUMMARY
#length 92 #molecular-weight 10168 #checksum 7516
Query Match 83.5%; Score 76; DB 2; Length 92;
Best Local Similarity 72.7%; Pred. No. 7,04e-04;
Matches 8; Conservative 3; Mismatches 0; Indels 0; Gaps 0;
Db 72 QICADPSEWV 82
QY 1 QVCADPSEWV 11
1:|||||:|
RESULT 9
ENTRY #type complete
TITLE macrophage inflammatory protein-1-alpha precursor - mouse
ALTERNATE_NAMES heparin-binding chemotaxis protein; L2G25B protein; SCI/WIP-1a; SIS alpha; stem cell inhibitor/macrophage inflammatory protein 1-alpha; T-cell activation protein alpha; TIS
ORGANISM #formal_name Mus musculus #common_name house mouse
DATE 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change 08-Sep-1997
ACCESSIONS S11685; A32393; S04533; A53885; A30552; PS0303; A27596; 156104
REFERENCE
#authors Grove, M.; Lowe, S.; Graham, G.; Pragnell, I.; Plumb, M.
#journal Nucleic Acids Res. (1990) 18:5561
#title Sequence of the murine haemopoietic stem cell inhibitor/macrophage inflammatory protein 1-alpha gene.
#cross-references MUID:91016858
#accession S11685
#molecule_type DNA
#residues 1-92 #label GRO
#cross-references EMBL:X53372; NID:g54062; PID:g297531
#note the authors' translation of the nucleotide sequence

```

REFERENCE A32393 differs at several positions from the sequence given

#authors Kwon, B.S.; Weissman, S.M.
#journal Proc. Natl. Acad. Sci. U.S.A. (1989) 86:1963-1967
#title cDNA sequence of two inducible T-cell genes.
#cross-references MUID:89184547
#accession A32393
##molecule_type mRNA
##residues 1-92 ##label KWO
##cross-references GB:044491; NID:g201524; PID:g201525

REFERENCE S04533
#authors Davatelis, G.; Tekamp-Olson, P.; Wolpe, S.D.; Hermesen, K.; Luedke, C.; Gallegos, C.; Coit, D.; Merryweather, J.; Cerami, A.
#journal J. Exp. Med. (1988) 167:1939-1944
#title Cloning and characterization of a cDNA for murine macrophage inflammatory protein (MIP), a novel monokine with inflammatory and chemokinetic properties.
#cross-references MUID:88258380
#accession S04533
##molecule_type mRNA
##residues 1-48,'E' 50-90,'I',92 ##label DA2
##cross-references EMBL:X12531
##note the authors translated the codon GAG for residue 49 as Asp and Arr for residue 91 as Asn
##note the sequence has been corrected in reference A53885

REFERENCE A53885
#authors Davatelis, G.; Tekamp-Olson, P.; Wolpe, S.D.; Hermesen, K.; Luedke, C.; Gallegos, C.; Coit, D.; Merryweather, J.; Cerami, A.
#journal J. Exp. Med. (1989) 170:2189
#contents erratum
#accession A53885
##molecule_type mRNA
##residues 1-92 ##label DAV
##cross-references EMBL:X12531; NID:g53122; PID:g53123

REFERENCE A30552
#authors Brown, K.D.; Zurawski, S.M.; Mosmann, T.R.; Zurawski, G.
#journal J. Immunol. (1989) 142:679-687
#title A family of small inducible proteins secreted by leukocytes are members of a new superfamily that includes leukocytes and fibroblast-derived inflammatory agents, growth factors, and indicators of various activation processes.
#cross-references MUID:89093958
#accession A30552
##molecule_type mRNA
##residues 1-21,'L',23-61,'A',63-92 ##label BRO
##cross-references GB:M23447; NID:g533240; PID:g533241

REFERENCE JL0088
#authors Sherry, B.; Tekamp-Olson, P.; Gallegos, C.; Bauer, D.; Davatelis, G.; Wolpe, S.D.; Maslarsz, F.; Coit, D.; Cerami, A.
#journal J. Exp. Med. (1988) 168:2251-2259
#title Resolution of the two components of macrophage inflammatory protein 1, and cloning and characterization of one of those components, macrophage inflammatory protein 1 beta.
#cross-references MUID:89067830
#accession PS0303
##molecule_type mRNA
##residues 24-33,'XX',36-54 ##label SHE
#authors A27596

REFERENCE S04533
#authors Wolpe, S.D.; Davatelis, G.; Sherry, B.; Beutler, B.; Hesse, D.G.; Nguyen, H.T.; Moldawer, L.L.; Nathan, C.F.; Lowry, S.F.; Cerami, A.
#journal J. Exp. Med. (1988) 167:570-581
#title Macrophages secrete a novel heparin-binding protein with inflammatory and neutrophil chemokinetic properties.
#cross-references MUID:88154745
#accession A27596
##molecule_type protein
##residues 24-33,'XX',36-42 ##label WOL
##note 26-Met, 30-Pro, and 39-Thr were also found
#accession I56104

#authors Widmer, U.; Yang, Z.; van Deventer, S.; Manogue, K.R.; Sherry, B.; Cerami, A.
#journal J. Immunol. (1991) 146:4031-4040
#title Genomic structure of murine macrophage inflammatory protein-1-alpha and conservation of potential regulatory sequences with a human homolog, LD78.
#cross-references MUID:91237116
#accession I56104
##status preliminary; translated from GB/EMBL/DBJ
##molecule_type DNA
##residues 1-92 ##label RES
##cross-references GB:M73061; NID:g199694; PID:g199695
COMMENT This protein is a monokine.
GENETICS 23/3; 26/1; 63/2
#introns
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS heparin binding
FEATURE 1-23
24-92
SUMMARY #length 92 #molecular-weight 10345 #checksum 5009
Query Match 82.4%; Score 75; DB 2; Length 92;
Best Local Similarity 66.7%; Pred. No. 1.13e-03;
Matches 8; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
Db 71 QICADSKETWVQ 82
QY 1 QVCADPSESQVQ 12
RESULT 10
ENTRY A54678 #type complete
TITLE monocyte chemoattractant protein 3 precursor - human
ALTERNATE_NAMES monocyte chemoattractant protein MCP-3
ORGANISM #formal_name Homo sapiens #common_name man
DATE 28-Oct-1994 #sequence_revision 28-Oct-1994 #text_change 17-Mar-1999
ACCESSION A54678; JCI478; S32222
REFERENCE A54678
#authors Opendakker, G.; Fiten, P.; Nys, G.; Froyen, G.; Van Roy, N.; Speleman, F.; Laureys, G.; Van Damme, J.
#journal Genomics (1994) 21:403-408
#title The human MCP-3 gene (SCYA7): cloning, sequence analysis, and assignment to the C-C chemokine gene cluster on chromosome 17q11.2-q12.
#cross-references MUID:94375065
#accession A54678
##molecule_type DNA
##residues 1-109 ##label OPD
##cross-references GB:X72309
REFERENCE JCI478
#authors Opendakker, G.; Froyen, G.; Fiten, P.; Proost, P.; Van Damme, J.
#journal Biochem. Biophys. Res. Commun. (1993) 191:535-542
#title Human monocyte chemoattractant protein-3 (MCP-3): Molecular cloning of the cDNA and comparison with other chemokines.
#cross-references MUID:93213290
#accession JCI478
##molecule_type mRNA
##residues 1-109 ##label OP2
REFERENCE S32222
#authors Minty, A.; Chalon, P.; Guillemot, J.C.; Kaghad, M.; Liauzun, P.; Magazin, M.; Miloux, B.; Minty, C.; Ramond, P.; Vita, N.; Lupker, J.; Shire, D.; Ferrara, P.; Caput, D.
#submission Submitted to the EMBL Data Library, March 1993
#description Molecular cloning of MCP-3: a human monocyte-derived monocyte chemoattractant protein.
#accession S32222
##molecule_type mRNA
##residues 1-109 ##label MIN
##cross-references EMBL:X71087; NID:g288396; PID:g288397

COMMENT This protein induces proteinase secretion and chemotaxis by macrophages and monocytes.

GENETICS
#gene GDB:SCYA7; SCYA6; MCP-3
#map_position 17q11-17q12
#introns 36/1; 75/2
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS cytokine; glycoprotein; inflammation
FEATURE
34-109 #domain signal sequence #status predicted #label SIG\ #product monocyte chemotactic protein 3 #status
1-33 #predicted #label MAT\
39 #binding_site carbohydrate (Asn) (covalent) #status predicted
SUMMARY #length 109 #molecular-weight 12356 #checksum 1535

Query Match 82.4%; Score 75; DB 2; Length 109;
Best Local Similarity 58.3%; Pred. No. 1.13e-03;
Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 83 ETCADPTQKWQ 94
:||||: |||
Qy 1 QVCADPSESQWQ 12

RESULT 11
ENTRY JEO177 #type complete
TITLE lymphocyte and monocyte chemoattractant CC chemokine - human
ORGANISM #formal_name Homo sapiens #common_name man
DATE 10-Jul-1998 #sequence_revision 10-Jul-1998 #text_change 17-Mar-1999
ACCESSIONS JEO177
REFERENCE YOUN, B.S.; Zhang, S.; Broxmeyer, H.E.; Antol, K.; Fraser Jr., M.J.; Hangoc, G.; Kwon, B.S.
#journal Biochem. Biophys. Res. Commun. (1998) 247:217-222
#title Isolation and characterization of LMC, a novel lymphocyte and monocyte chemoattractant human CC chemokine, with myelosuppressive activity.
#cross-references MUID:98308096
#accession JEO177
#molecule_type mRNA
#residues 1-120 #label YCQ
SUMMARY #length 120 #molecular-weight 13600 #checksum 230

Query Match 81.3%; Score 74; DB 2; Length 120;
Best Local Similarity 50.0%; Pred. No. 1.80e-03;
Matches 6; Conservative 5; Mismatches 1; Indels 0; Gaps 0;

Db 74 EVCTNPDDWQ 85
:||||: |||
Qy 1 QVCADPSESQWQ 12

RESULT 12
ENTRY JC2417 #type complete
TITLE monocyte chemoattractant protein-2 precursor - pig
ORGANISM #formal_name Sus scrofa domestica #common_name domestic pig
DATE 24-Feb-1995 #sequence_revision 24-Feb-1995 #text_change 17-Mar-1999
ACCESSIONS JC2417
REFERENCE Hosang, K.; Knoke, I.; Klaudiny, J.; Wempe, F.; Wuttke, W.; Scheit, K.H.
#journal Biochem. Biophys. Res. Commun. (1994) 205:148-153
#title porcine luteal cells express monocyte chemoattractant protein-2 (MCP-2): Analysis by cDNA cloning and northern analysis.
#cross-references MUID:95091716
#accession JC2417
#molecule_type mRNA
#residues 1-99 #label HOS

##experimental_source corpus luteum
CLASSIFICATION #superfamily macrophage inflammatory protein
FEATURE
1-23 #domain signal sequence #status predicted #label SIG\
24-99 #product monocyte chemoattractant protein-2 #status predicted #label MAT
SUMMARY #length 99 #molecular-weight 10903 #checksum 7556

Query Match 80.2%; Score 73; DB 2; Length 99;
Best Local Similarity 66.7%; Pred. No. 2.85e-03;
Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 73 EVCADPQOKWQ 84
:||||: |||
Qy 1 QVCADPSESQWQ 12

RESULT 13
ENTRY A60299 #type complete
TITLE monocyte chemoattractant protein 1 precursor - human
ALTERNATE_NAMES GDCF-1; glioma-derived monocyte chemotactic factor 1; MCAF; MCP-1; monocyte chemotactic factor 1; monocyte secretory protein; tumor-derived chemotactic factor
CONTAINS glioma-derived chemotactic factor 2 (GDCF-2)
ORGANISM #formal_name Homo sapiens #common_name man
DATE 20-Feb-1993 #sequence_revision 20-Feb-1993 #text_change 20-Mar-1998
ACCESSIONS A35474; A33476; S03339; I51841; A60299; A32300; A32396; A34561; I57488; JC1096
REFERENCE SHYU, Y.J.; Li, Y.S.; Kolattukudy, P.E.
#authors Biochem. Biophys. Res. Commun. (1990) 169:346-351
#journal Structure of human monocyte chemotactic protein gene and its regulation by TPA.
#title
#cross-references MUID:90290466
#accession A35474
#molecule_type DNA
#residues 1-99 #label SHY
#cross-references GB:M37719; NID:g187447; PID:g487124

REFERENCE A33476
#authors Rollins, B.J.; Stier, P.; Ernst, T.; Wong, G.G.
#journal Mol. Cell. Biol. (1989) 9:4687-4695
#title The human homolog of the JE gene encodes a monocyte secretory protein.
#cross-references MUID:90097880
#accession A33476
#molecule_type mRNA
#residues 1-99 #label ROL
#cross-references GB:M30816; GB:M31625; GB:M31626; NID:gl88701; PID:g386961

REFERENCE S03339
#authors Yoshimura, T.; Yuhki, N.; Moore, S.K.; Appella, E.; Lerman, M.I.; Leonard, E.J.
#journal FEBS Lett. (1989) 244:487-493
#title Human monocyte chemoattractant protein-1 (MCP-1). Full-length cDNA cloning, expression in mitogen-stimulated blood mononuclear leukocytes, and sequence similarity to mouse competence gene JE.
#cross-references MUID:89153605
#accession S03339
#status not compared with conceptual translation
#molecule_type mRNA
#residues 1-99 #label YOS
#cross-references GB:X14768; NID:g34513; PID:g34514
#experimental_source glioma cell line U-105MG

REFERENCE I51841
#authors Yoshimura, T.; Leonard, E.J.
#journal Adv. Exp. Med. Biol. (1991) 305:47-56
#title Human monocyte chemoattractant protein-1 (MCP-1).
#cross-references MUID:92095166
#accession I51841
#status preliminary; translated from GB/EMBL/DDBJ
#molecule_type mRNA

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##residues 1-99 ##label Y02
##Cross-references GB:S71513; NID:g240867; PID:g240868
REFERENCE A60299
#authors Botazzi, B.; Colotta, F.; Sica, A.; Nobili, N.; Mantovani, A.
#journal Int. J. Cancer (1990) 45:795-797
#title A chemotactant expressed in human sarcoma cells (tumor-derived chemotactic factor, TDCF) is identical to monocyte chemotactant protein-1/monocyte chemotactic and activating factor (MCP-1/MCAF).
#accession A60299
##status not compared with conceptual translation
##molecule_type mRNA
##residues 1-99 ##label BOT
REFERENCE A32300
#authors Furutani, Y.; Nomura, H.; Notake, M.; Oyama, Y.; Fukui, T.; Yamada, M.; Larsen, C.G.; Oppenheim, J.J.; Matsushima, K.; Blochem. Biophys. Res. Commun. (1989) 159:249-255
#journal Cloning and sequencing of the cDNA for human monocyte chemotactic and activating factor (MCAF).
#title #cross-references MUID:89165862
#accession A32300
##status not compared with conceptual translation
##molecule_type mRNA
##residues 1-99 ##label FUR
##Cross-references GB:M24545; NID:gl87434; PID:g307163
REFERENCE A32396
#authors Robinson, E.A.; Yoshimura, T.; Leonard, E.J.; Tanaka, S.; Griffin, P.R.; Shabanowitz, J.; Hunt, D.F.; Appella, E.
#journal Proc. Natl. Acad. Sci. U.S.A. (1989) 86:1850-1854
#title Complete amino acid sequence of a human monocyte chemotactant, a putative mediator of cellular immune reactions.
#cross-references MUID:89184525
#accession A32396
##molecule_type protein
##residues 'X', 25-99 ##label ROB
REFERENCE A34561
#authors Decock, B.; Conings, R.; Lenaerts, J.P.; Billiau, A.; Van Damme, J.
#journal Biochem. Biophys. Res. Commun. (1990) 167:904-909
#title Identification of the monocyte chemotactic protein from human osteosarcoma cells and monocytes: detection of a novel N-terminally processed form.
#cross-references MUID:90211336
#accession A34561
##molecule_type protein
##residues 20-33, 'XX', 36-52; 82-92 ##label DEC
REFERENCE I57488
#authors Li, Y.S.; Shyy, Y.J.; Wright, J.G.; Valente, A.J.; Cornhill, J.F.; Kolattukudy, P.E.
#journal Mol. Cell. Biochem. (1993) 126:61-68
#title The expression of monocyte chemotactic protein (MCP-1) in human vascular endothelium in vitro and in vivo.
#cross-references MUID:94150478
#accession I57488
##status translated from GB/EMBL/DBJ
##molecule_type mRNA
##residues 1-99 ##label LIY
##Cross-references GB:S69738; NID:g545464; PID:g545465
REFERENCE JC1096
#authors Ye, Q.N.; Su, G.F.; Yuan, Y.; Huang, C.F.
#journal Chinese J. Microbiol. Immunol. (1994) 14:29-32
#title The PCR, cloning and sequencing of human monocyte chemotactant protein-1 (MCP-1) gene.
#accession JC1096
##molecule_type mRNA
##residues 24-28, 'Q', 30-99 ##label YEQ
GENETICS
#gene GDB:SCYA2
#map_position 17q11.2-17q12
#CLASSIFICATION #superfamily macrophage inflammatory protein

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KEYWORDS
FEATURE 1-23
24-99
29-99
24
37
SUMMARY
Query Match 79.13; Score 72; DB 2; Length 99;
Best Local Similarity 58.3%; Pred. No. 4.53e-03;
Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;
Db 73 EICADPKQKVVQ 84
QY 1 QVCADPSESVMQ 12
RESULT 14
ENTRY A46539 #type complete
TITLE monocyte chemotactant cytokine RANTES precursor - mouse
ALTERNATE_NAMES MuRantes
ORGANISM Mus musculus
#formal_name Mus musculus #common_name house mouse
DATE 18-Jun-1993 #sequence_revision 16-Aug-1996 #text_change 22-Jan-1999
ACCESSIONS I48875; A46539; I48654; I56970
REFERENCE I48875
#authors Danoff, T.M.; Lalley, P.A.; Chang, Y.S.; Heeger, P.S.; Neilson, E.G.
#journal J. Immunol. (1994) 152:1182-1189
#title Cloning, genomic organization, and chromosomal localization of the Scv5 gene encoding the murine chemokine RANTES.
#cross-references MUID:94132613
#accession I48875
##status preliminary; translated from GB/EMBL/DBJ
##molecule_type DNA
##residues_type 1-91 ##label DAN
##Cross-references EMBL:U02298; NID:g460090; PID:g460091
REFERENCE A46539
#authors Schall, T.J.; Simpson, N.J.; Mak, J.Y.
#journal Eur. J. Immunol. (1992) 22:1477-1481
#title Molecular cloning and expression of the murine RANTES cytokine: structural and functional conservation between mouse and man.
#cross-references MUID:92289805
#accession A46539
##molecule_type mRNA
##residues 1-18, 'A', 20-91 ##label SCH
##Cross-references GB:S37648; NID:g250207; PID:g250208
#experimental_source macrophage cell line PU5-1.8
#note sequence extracted from NCBI backbone (NCBI:106768, NCBI:106770)
REFERENCE I48654
#authors Shin, H.S.; Drysdale, B.E.; Shin, M.L.; Noble, P.W.; Fisher, S.N.; Paznekas, W.A.
#journal Mol. Cell. Biol. (1994) 14:2914-2925
#title Definition of a lipopolysaccharide-responsive element in the 5'-flanking regions of MuRantes and crg-2.
#cross-references MUID:94217689
#accession I48654
##status translation not shown; translated from GB/EMBL/DBJ
##molecule_type DNA
##residues 1-91 ##label SHI
##Cross-references EMBL:X70675; NID:g475205; PID:g475206
REFERENCE I56970
#authors Neilson, E.G.; Krensky, A.
#journal Kidney Int. (1992) 41:220-225
#title Isolation and characterization of cDNA from renal tubular epithelium encoding murine Rantes: A small intercrine from

```

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cytokine; glycoprotein; inflammation; pyroglutamic acid
#domain signal sequence #status predicted #label SIC\
#product monocyte chemotactant protein 1 #status experimental #label MAT\
#product monocyte chemotactant protein 1, short form #status experimental #label MAT2\
#modified_site pyroglutamate carboxylic acid (Gln) (in mature form) #status experimental\
#binding_site carbohydrate (Asn) (covalent) #status predicted
#length 99 #molecular_weight 11025 #checksum 7984

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Query Match 79.13; Score 72; DB 2; Length 99;
Best Local Similarity 58.3%; Pred. No. 4.53e-03;
Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;
Db 73 EICADPKQKVVQ 84
QY 1 QVCADPSESVMQ 12
RESULT 14
ENTRY A46539 #type complete
TITLE monocyte chemotactant cytokine RANTES precursor - mouse
ALTERNATE_NAMES MuRantes
ORGANISM Mus musculus
#formal_name Mus musculus #common_name house mouse
DATE 18-Jun-1993 #sequence_revision 16-Aug-1996 #text_change 22-Jan-1999
ACCESSIONS I48875; A46539; I48654; I56970
REFERENCE I48875
#authors Danoff, T.M.; Lalley, P.A.; Chang, Y.S.; Heeger, P.S.; Neilson, E.G.
#journal J. Immunol. (1994) 152:1182-1189
#title Cloning, genomic organization, and chromosomal localization of the Scv5 gene encoding the murine chemokine RANTES.
#cross-references MUID:94132613
#accession I48875
##status preliminary; translated from GB/EMBL/DBJ
##molecule_type DNA
##residues_type 1-91 ##label DAN
##Cross-references EMBL:U02298; NID:g460090; PID:g460091
REFERENCE A46539
#authors Schall, T.J.; Simpson, N.J.; Mak, J.Y.
#journal Eur. J. Immunol. (1992) 22:1477-1481
#title Molecular cloning and expression of the murine RANTES cytokine: structural and functional conservation between mouse and man.
#cross-references MUID:92289805
#accession A46539
##molecule_type mRNA
##residues 1-18, 'A', 20-91 ##label SCH
##Cross-references GB:S37648; NID:g250207; PID:g250208
#experimental_source macrophage cell line PU5-1.8
#note sequence extracted from NCBI backbone (NCBI:106768, NCBI:106770)
REFERENCE I48654
#authors Shin, H.S.; Drysdale, B.E.; Shin, M.L.; Noble, P.W.; Fisher, S.N.; Paznekas, W.A.
#journal Mol. Cell. Biol. (1994) 14:2914-2925
#title Definition of a lipopolysaccharide-responsive element in the 5'-flanking regions of MuRantes and crg-2.
#cross-references MUID:94217689
#accession I48654
##status translation not shown; translated from GB/EMBL/DBJ
##molecule_type DNA
##residues 1-91 ##label SHI
##Cross-references EMBL:X70675; NID:g475205; PID:g475206
REFERENCE I56970
#authors Neilson, E.G.; Krensky, A.
#journal Kidney Int. (1992) 41:220-225
#title Isolation and characterization of cDNA from renal tubular epithelium encoding murine Rantes: A small intercrine from

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Sat Feb 5 12:04:33 2000

```

the SCY superfamily.
#cross-references MUID:92277990
#accession I56970
#status translated from GB/EMBL/DBDJ
##molecule_type mRNA
##residues 1-40,'E',42-91 ##label NEI
##cross-references GB:M77747; NID:g200649; PID:g200650
#COMMENT This chemotactant for monocytes but not neutrophils is an
immediate-early response protein to LPS stimulation.

GENETICS
#introns 26/1; 63/2
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS chemotaxis; cytokine; immediate-early protein; inflammation
FEATURE
1-23 #domain signal sequence #status predicted #label SIG\
24-91 #product monocyte chemoattractant cytokine RANTES
#status predicted #label MAT
SUMMARY #length 91 #molecular-weight 10071 #checksum 3010

Query Match 78.0%; Score 71; DB 1; Length 91;
Best Local Similarity 66.7%; Pred. No. 7.16e-03;
Matches 8; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

Db 71 QVCANPEKKWVQ 82
QY 1 QVCADPSESQVQ 12

RESULT 15
ENTRY #type complete
TITLE monocyte chemotactic protein-2 precursor - human
ORGANISM #formal_name Homo sapiens #common_name man
DATE 02-May-1997 #sequence_revision 18-Jul-1997 #text_change
17-Mar-1999
ACCESSIONS JC5295
REFERENCE JC5295
#authors Van Coillie, E.; Froyen, G.; Nomiya, H.; Miura, R.; Fiten,
P.; Van Aelst, I.; Van Damme, J.; Opdenakker, G.
#journal Biochem. Biophys. Res. Commun. (1997) 231:726-730
#title Human monocyte chemotactic protein-2: cDNA cloning and
regulated expression of mRNA in mesenchymal cells.
#cross-references MUID:97224420
#accession JC5295
##molecule_type mRNA
##residues 1-99 #label VAN
##cross-references GB:Y10802; NID:g1924937; PID:e294088; PID:g1924938
##experimental_source bone marrow
#COMMENT This protein belongs to the beta-chemokine family which is one of
the major HIV-suppressive factors. It plays roles in autoimmune
processes such as multiple sclerosis and rheumatoid arthritis and
in tumor biology, and contribute to the trafficking and
recruitment of the responsive cells.

GENETICS
#gene mcp-2
CLASSIFICATION #superfamily macrophage inflammatory protein
FEATURE
1-23 #domain signal sequence #status predicted #label SIG\
24-99 #product monocyte chemotactic protein-2 #status
predicted #label MAT
SUMMARY #length 99 #molecular-weight 11246 #checksum 6596

Query Match 78.0%; Score 71; DB 2; Length 99;
Best Local Similarity 66.7%; Pred. No. 7.16e-03;
Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 73 EVCADPKEWVR 84
QY 1 QVCADPSESQVQ 12

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Search completed: Fri Feb 4 17:33:18 2000
Job time : 32 secs.

[W][P][S][R][E][L] (TM)

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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm
Run on: Fri Feb 4 17:32:10 2000; MasPar time 3.66 Seconds
Tabular output not generated. 69.659 Million cell updates/sec

Title: >US-09-150-813-44
Description: (1-12) from US09150813.ppe
Perfect Score: 91
Sequence: 1 QVCADPSESQWV 12
Scoring table: GAP 150
Gap 15

Searched: 170751 seqs, 21266608 residues
Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: a-geneseq35
1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
14:part14 15:part15 16:part16 17:part17 18:part18
19:part19 20:part20 21:part21 22:part22 23:part23
24:part24 25:part25 26:part26 27:part27 28:part28
29:part29 30:part30 31:part31 32:part32 33:part33
34:part34 35:part35 36:part36 37:part37 38:part38
39:part39

Statistics: Mean 18.046; Variance 69.849; scale 0.258
Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES					
Result No.	Score	Query Match	Description	Pred. No.	
1	91	100.0	69 7 R38981	LD78 Glu56>Ser.	8.88e-02
2	91	100.0	74 7 R38925	ACT-2.	8.88e-02
3	91	100.0	91 1 P91030	Human H400 polypeptid	8.88e-02
4	91	100.0	92 39 W82717	Human Act-2 protein.	8.88e-02
5	91	100.0	92 7 R36770	MIP-1beta.	8.88e-02
6	91	100.0	92 4 R22712	Human MIP-1 alpha	8.88e-02
7	91	100.0	92 1 R04220	Act-2 clone gene prod	8.88e-02
8	91	100.0	92 1 R04222	PAT744 gene product e	8.88e-02
9	91	100.0	92 35 W76225	Human chemokine MIP-1	8.88e-02
10	91	100.0	92 13 R07098	MIP-1-beta.	8.88e-02
11	91	100.0	92 1 R05900	Act-2 gene product.	8.88e-02
12	91	100.0	93 1 R05903	PAT 744 gene product.	8.88e-02
13	91	100.0	331 35 W76223	Human chemokine MIP-1	8.88e-02
14	86	94.5	66 7 R38948	NI-3 LD78.	2.65e-01
15	86	94.5	69 7 R39146	LD78 Arg17>Glu.	2.65e-01
16	86	94.5	69 7 R38938	LD78 Phe28>Glu.	2.65e-01

17	86	94.5	69 7 R38957	LD78 Ile40>Ala.	2.65e-01
18	86	94.5	69 7 R38969	LD78 Ser46>Ala.	2.65e-01
19	86	94.5	69 7 R38982	LD78 Lys60>Ser.	2.65e-01
20	86	94.5	69 7 R38927	LD78 Lys44>Glu, Arg45	2.65e-01
21	86	94.5	69 7 R38956	LD78 Ile24>Ala.	2.65e-01
22	86	94.5	69 7 R39140	LD78 Lys44>Glu.	2.65e-01
23	86	94.5	69 7 R38953	LD78 Asp28>Ser.	2.65e-01
24	86	94.5	69 7 R38959	LD78 Glu29>Ser.	2.65e-01
25	86	94.5	69 7 R38945	LD78 Arg17>Ser, Gln18	2.65e-01
26	86	94.5	69 7 R39144	LD78 Ile24>Leu.	2.65e-01
27	86	94.5	69 7 R38955	LD78 Phe28>Ala.	2.65e-01
28	86	94.5	69 7 R38928	LD78 Ala9>Ser.	2.65e-01
29	86	94.5	69 7 R39099	LD78 Ser35>Ala.	2.65e-01
30	86	94.5	69 7 R39085	LD78 Leu65>Ala.	2.65e-01
31	86	94.5	69 7 R38977	LD78 Phe23>Ala.	2.65e-01
32	86	94.5	69 7 R38936	LD78 Arg47>Glu.	2.65e-01
33	86	94.5	69 7 R38944	LD78 Gln18>Glu.	2.65e-01
34	86	94.5	69 7 R39083	LD78 Asp26>Ala, Glu29	2.65e-01
35	86	94.5	69 7 R38966	LD78 Ala4>Glu.	2.65e-01
36	86	94.5	69 7 R38939	LD78 Ile24>Asn.	2.65e-01
37	86	94.5	69 7 R38958	LD78 Arg47>Ser.	2.65e-01
38	86	94.5	69 7 R39134	LD78 Ile40>Asn.	2.65e-01
39	86	94.5	69 7 R38976	LD78 Asp5>Ser.	2.65e-01
40	86	94.5	69 7 R38972	LD78 Ala4>Ser.	2.65e-01
41	86	94.5	70 7 R38949	Ala-Ser1>Pro LD78.	2.65e-01
42	86	94.5	72 7 R38950	Leu-Ser-Ala-Ser1>Pro	2.65e-01
43	86	94.5	92 39 W82722	Human M1A protein.	2.65e-01
44	86	94.5	93 39 W82721	Human M10 protein.	2.65e-01
45	86	94.5	93 13 R70797	MIP-1-alpha.	2.65e-01

ALIGNMENTS

RESULT 1
ID R38981 standard; Protein; 69 AA.
AC R38981, 1993 (first entry)
DE LD78 Glu56>Ser.
KW SC1; stem cell inhibition; LD78; ACT2; MIP-lalpa;
KW macrophage inflammatory protein; multimer; tumour therapy;
KW psoriasis; hyperproliferation.
OS Homo sapiens.
PN WO9313206-A.
PD 08-JUL-1993.
PF 23-DEC-1991; G02390.
PR 23-DEC-1991; GB-027319.
PR 14-OCT-1992; GB-021587.
PA (BRRI-) BRITISH BIO-TECHNOLOGY LTD.
PI Craig S, Czaplowski LG, Edwards RM, Gilbert RJ;
PI Hunter MG;
PI WPI; 93-227322/28.
DR Protein with stem cell inhibition activity, e.g. LD78 or MIP-1
PT alpha - unable to form stable multimer higher than dodecamer,
PT providing better tissue penetration
PS Example 56; Page 70; 294pp; English.
CC Analogues of natural stem cell inhibitors, such as LD78 and MIP-
CC lalpa, having mutations to prevent or reduce multimer formation
CC beyond certain stages (e.g. dodecamer), have improved solution
CC properties leading to enhanced productivity and greater therapeutic
CC utility as stem cell protective agents. The analogues may be used
CC in tumour therapy, psoriasis or other diseases involving hyper-
CC proliferative stem cells.
CC Most pref. LD78 analogues are Phe12>Gln, Lys44>Ser, Arg17>Glu (with
CC Gln18>Glu) and, esp., Asp26>Ala and Glu66>Ser. Pref. MIP-lalpa
CC analogues correspond to the pref. LD78 analogues.
SQ Sequence 69 AA;

Query Match 100.0%; Score 91; DB 7; Length 69;
Best Local Similarity 100.0%; Pred. No. 8.88e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Db 48 qvcadpseswvq 59
|||||||

```

QY      1 QVCADPSESQWQ 12

RESULT  2
ID      R38925 standard; Protein; 74 AA.
AC      R38925;
DT      23-NOV-1993 (first entry)
DE      ACT-2.
KW      SCI; stem cell inhibition; LD78; ACT2; MIP-lalpa;
KW      macrophage inflammatory protein; multimer; tumour therapy;
KW      psoriasis; hyperproliferation.
OS      Synthetic (Homo sapiens).
PN      W09313206-A.
PD      08-JUL-1993.
PF      23-DEC-1992; G02390.
PR      23-DEC-1991; GB-027319.
PR      14-OCT-1992; GB-021587.
PA      (BRBI-) BRITISH BIO-TECHNOLOGY LTD.
PI      Craig S, Czaplewski LG, Edwards RM, Gilbert RJ;
PI      Hunter MG;
PI      WPI; 93-227322/28.
DR      N-PSDB; Q44267.
DR      Protein with stem cell inhibition activity, e.g. LD78 or MIP-1
PT      alpha - unable to form stable multimer higher than dodecamer,
PT      providing better tissue penetration
PS      Disclosure; Page 181-182; 294pp; English.
CC      The secondary and tertiary structure of LD78 and MIP-lalpa have
CC      been shown to be almost identical. Only a difference in the nature
CC      of a side-chain or charge interaction in the vicinity of Trp57 is
CC      observed for the two proteins. Despite having a similar secondary
CC      structure to LD78 and MIP-lalpa, near u.v. C'd. studies show ACT2
CC      has a different tertiary conformation as highlighted by the shape
CC      and intensity of the spectrum. This provides strong evidence that
CC      LD78 and not ACT2 is the human homologue of MIP-lalpa.
CC      Analogues of natural stem cell inhibitors, such as LD78 and MIP-
CC      lalpa, having mutations to prevent or reduce multimer formation
CC      beyond certain stages (e.g. dodecamer), have improved solution
CC      properties leading to enhanced productivity and greater therapeutic
CC      utility as stem cell protective agents. The analogues may be used
CC      in tumour therapy, psoriasis or other diseases involving hyper-
CC      proliferative stem cells.
CC      Most pref. LD78 analogues are Phe12>Gln, Lys44>Ser, Arg17>Glu (with
CC      Gln18>Glu) and, esp., Asp26>Ala and Glu66>Ser. Pref. MIP-lalpa
CC      analogues correspond to the pref. LD78 analogues.
CC      Sequence 74 AA;

Query Match      100.0%; Score 91; DB 7; Length 74;
Best Local Similarity 100.0%; Pred. No. 8.88e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db      54 qvcadpseswq 65
QY      1 QVCADPSESQWQ 12

RESULT  3
ID      P91030 standard; peptide; 91 AA.
AC      P91030;
DT      27-NOV-1989 (first entry).
DE      Human H400 polypeptide.
KW      H400 polypeptide; markers; activated T cells;
KW      pCB(SR-alpha)-H400; immunogenic; immune system; antibody; human.
OS      Homo sapiens (human).
PN      Key Location/Qualifiers
PD      peptide 2...91
PD      peptide 24...91
PD      EP-329363-A.
PD      13-AUG-1989.
PF      13-FEB-1989; 301341.
PR      18-FEB-1988; US-157743.
PA      (SCHE) Schering Biotech. Co.
PI      BROWN KD, Mosmann TR, Zurawski G, Zurawski SM;
PI      WPI; 89-243262/34.

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PT      New polypeptide H400 and encoding nucleic acid
PT      - used as markers specific for activated T cells,
PT      for monitoring the immune system.
PS      Disclosure; fig 2; 16pp; English.
CC      H400 polypeptide (see N90532). This protein is specifically
CC      produced by activated T cells, and is useful for
CC      detecting cells which produce H400 or mRNA transcripts of
CC      H400 for monitoring the immune system. Claims 1 and 2 give
CC      polypeptides corresp. to the featured peptides above.
CC      Sequence 91 AA;

Query Match      100.0%; Score 91; DB 1; Length 91;
Best Local Similarity 100.0%; Pred. No. 8.88e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db      71 qvcadpseswq 82
QY      1 QVCADPSESQWQ 12

RESULT  4
ID      W82717 standard; Protein; 92 AA.
AC      W82717;
DT      15-MAR-1999 (first entry)
DE      Human Act-2 protein.
KW      Chemokine; ZCHEMO-8; human; pathological condition; infection; cancer;
KW      autoimmune disorder; immunodeficiency; myeloepietic; wound healing;
KW      transplant; progenitor cell; HIV infection; AIDS; chemotherapy;
KW      radiation therapy; T cell; macrophage activation inhibitor; B lymphocyte;
KW      chronic inflammatory disease; infective disease; diagnosis; detection;
KW      drug screening; gene therapy; Act-2.
OS      Homo sapiens.
PN      W09854326-A1.
PD      03-DEC-1998.
PF      19-MAY-1998; U10329.
PR      29-MAY-1997; US-047860.
PA      (ZYMO) ZYMOGENETICS INC.
PI      Sheppard PO;
PI      WPI; 99-059841/05.
DR      New isolated human beta-chemokine, ZCHEMO-8 - used to develop
PT      products for treating e.g. ischaemia, reperfusion, wound healing,
PT      autoimmune diseases, inflammation, asthma or infections
PS      Disclosure; Page 93; 131pp; English.
CC      This sequence represents a human beta chemokine, Act-2 which is used to
CC      describe a method in which a novel beta chemokine, ZCHEMO-8 is isolated.
CC      Altered levels of ZCHEMO-8 may be indicative of pathological conditions,
CC      including infections, cancer, myeloepietic disorders, autoimmune
CC      disorders and immunodeficiencies. The ZCHEMO-8 polypeptides can be used,
CC      e.g. to reduce the damage in ischaemic and reperfusion injuries, in a
CC      wound healing regime to stimulate an infiltration of immune cells (e.g.
CC      monocytes, neutrophils, T lymphocytes or basophils) to a wound site to
CC      facilitate healing. ZCHEMO-8 may be used to mobilise progenitor cells from
CC      the marrow into the peripheral blood for transplants. ZCHEMO-8
CC      polypeptides could be used to further define the role of chemokines in
CC      mediating suppression of HIV replication in CD4+ T-cells and limiting
CC      progression of HIV infection to AIDS. Use may be made of ZCHEMO-8
CC      polypeptides during chemotherapy or radiation therapy, to protect
CC      haematopoietic cells. ZCHEMO-8 antagonists may have a beneficial
CC      therapeutic effect in diseases where the inhibition of activation of
CC      certain macrophages, neutrophils, basophils, B lymphocytes and/or T cells
CC      may be effective. Such diseases include autoimmune diseases e.g. multiple
CC      rheumatoid arthritis, allergies, asthma or arteriosclerosis. Also benefit
CC      may be derived from using ZCHEMO-8 antagonists for chronic inflammatory
CC      and infective diseases. Antagonists may be used to dampen or inactivate
CC      ZCHEMO-8 during activated immune response. The products can also be used
CC      for detection, diagnosis, drug screening or gene therapy.
CC      Sequence 92 AA;

Query Match      100.0%; Score 91; DB 39; Length 92;
Best Local Similarity 100.0%; Pred. No. 8.88e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

Db 72 qvcadpseswvq 83
 QY 1 QVCADPSESQVQ 12

RESULT 5

ID R36770 standard; protein; 92 AA.
 AC R36770;
 DT 29-SEP-1993 (first entry)
 DE MIP-lbeta.
 KW Macrophage inflammatory protein; megakaryocytopoiesis; MIP-1; MIP-2;
 KW thrombocythemia; reactive thrombocytosis; stroke; emboli; platelet;
 KW myeloproliferative disorder.
 OS Homo sapiens.
 PN W0930799-A.
 PD 27-MAY-1993.
 PF 13-NOV-1992; U09671.
 PR 15-NOV-1991; US-792988.
 PA (UYPE-) UNIV PENNSYLVANIA.
 PI Gewirtz AM.
 DR WPI: 93-182239/22.
 PT Suppression of megakaryocytopoiesis - by administration of
 PT macrophage inflammatory protein-1 or -2
 PS Disclosure; Page 17; 26pp; English.
 CC A claimed method for reducing the no. of circulating platelets in the
 CC bloodstream of a mammal comprises admin. of MIP-1 and/or MIP-2 or
 CC their analogues to induce such a reduction. The MIP-1, MIP-2 or
 CC analogue may be operatively linked to a carrier. The MIPs can be
 CC used to inhibit megakaryocytopoiesis to effect in vivo reduction of
 CC platelet nos. They can be used to treat disorders with excessively
 CC high platelet counts such as thrombocytosis, stroke, pulmonary emboli
 CC and myeloproliferative disorders.
 SQ Sequence 92 AA;

Query Match 100.0%; Score 91; DB 7; Length 92;
 Best Local Similarity 100.0%; Pred. No. 8.88e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 72 qvcadpseswvq 83
 QY 1 QVCADPSESQVQ 12

RESULT 6

ID R22712 standard; protein; 92 AA.
 AC R22712;
 DT 22-SEP-1992 (first entry)
 DE Human MIP-1 alpha
 KW Macrophage inducible protein; cancer diagnosis; infection;
 KW myelopietic dysfunction; autoimmune disease; ss.
 OS Homo sapiens.
 PN W09205198-A.
 PD 02-APR-1992.
 PF 13-SEP-1991; U06489.
 PR 14-SEP-1990; US-582636.
 PA (CHIR-) CHIRON CORP.
 PI Gallegos C A, Tekamp-Olson P;
 DR WPI: 92-132088/16.
 DR N-PSDB: Q23729.
 PT Expression of pure mammalian macrophage inducible proteins in
 PT yeast - to produce MIP for treatment and diagnosis of cancer,
 PT infection, myelopietic dysfunction, etc.
 PS Example 3; Fig 1; 38pp; English.
 CC This sequence was deduced from the nucleotide sequence Q23729.
 CC The protein was produced by cloning into the expression vector
 CC PYMP300. The human MIP-1alpha sequence was derived from the
 CC lambda gt10 cDNA clone hMIP1-13a, and the GAPDH promoter sequence,
 CC alpha factor transcription terminator derived from plasmid pGAL1,
 CC the construction of which is described in patent application
 CC EP0324-274. Recombinantly produced MIP proteins have diagnostic and
 CC therapeutic utility for detecting and treating infections, cancer,
 CC myelopietic dysfunction and autoimmune diseases. Although not
 CC directly cytotoxic for WEHI tumor cells, MIP-1 treated macrophages

CC exhibited enhanced antibody-independent macrophage cytotoxicity for
 CC tumour targets. MIP-1 treatment stimulated proliferation of mature
 CC tissue macrophages; this effect was synergistic with both CSF-1 and
 CC GM-CSF. Purified preparations of the recombinantly derived
 CC MIP-1alpha peptide alone induced TNF and IL-6 in macrophages, but
 CC MIP-lbeta did not. As little as twofold excess MIP-lbeta blocked
 CC TNF-induction by MIP-lalpha to a significant degree. Other
 CC bioactivity defined for native MIP-1 and recombinant MIP-lalpha
 CC is the inhibition of proliferation of less differentiated
 CC erythropoietin IL-3 dependent hematopoietic progenitor cells.
 SQ Sequence 92 AA;

Query Match 100.0%; Score 91; DB 4; Length 92;
 Best Local Similarity 100.0%; Pred. No. 8.88e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 72 qvcadpseswvq 83
 QY 1 QVCADPSESQVQ 12

RESULT 7

ID R04220 standard; protein; 92 AA.
 AC R04220;
 DT 12-SEP-1990 (first entry)
 DE Act-2 clone gene product is activated human peripheral blood
 DE mononuclear cell (PBMC).
 KW Peripheral blood mononuclear cell; PBMC; lymphokine;
 KW cytokine; mitogen; ds.
 OS Homo sapiens.
 PN US7312001-A.
 PD 13-MAR-1990.
 PF 16-DEC-1988; 312001.
 PR 16-DEC-1988; US-312001.
 PA (USSH) US Dept Health & Human.
 PI Siebenlist U, Leonard WJ, Zipfel PJ, Irving SG, Kelly K;
 DR WPI: 90-139708/18.
 DR N-PSDB: Q03682.
 PT New lymphokine-cytokine genes -
 PT isolated using mRNA from activated human peripheral blood
 PT mononuclear cells and T cells.
 PS Disclosure; 84pp; English.
 CC The lymphokine/cytokine-like proteins are associated with the
 CC inflammatory response and/or have mitogenic activities. Antigens
 CC raised to the proteins may be useful in detection and purification,
 CC especially in bioassays of various tumour cells or genetic defects
 CC in the inflammatory response.
 SQ Sequence 92 AA;

Query Match 100.0%; Score 91; DB 1; Length 92;
 Best Local Similarity 100.0%; Pred. No. 8.88e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 72 qvcadpseswvq 83
 QY 1 QVCADPSESQVQ 12

RESULT 8

ID R04222 standard; protein; 92 AA.
 AC R04222;
 DT 12-SEP-1990 (first entry)
 DE PAT744 gene product encoding activated T cell mRNAs.
 DE Peripheral blood mononuclear cell; PBMC; lymphokine;
 KW cytokine; mitogen; ds.
 OS Homo sapiens.
 PN US7312001-A.
 PD 13-MAR-1990.
 PF 16-DEC-1988; 312001.
 PR 16-DEC-1988; US-312001.
 PA (USSH) US Dept Health & Human.
 PI Siebenlist U, Leonard WJ, Zipfel PJ, Irving SG, Kelly K;
 DR WPI: 90-139708/18.

```

DR N-PSDB: Q03684.
PT New lymphokine-cytokine genes -
PT isolated using mRNA from activated human peripheral blood
PT mononuclear cells and T cells.
PS Disclosure; 184pp; English.
CC The lymphokine/cytokine-like proteins are associated with the
CC inflammatory response and/or have mitogenic activities. Antigens
CC raised to the proteins may be useful in detection and purification,
CC especially in bioassays of various tumour cells or genetic defects
CC in the inflammatory response.
CC The best copy of the sequence available is still unclear and some
CC errors in the sequence may occur.
SQ Sequence 92 AA;

Query Match 100.0%; Score 91; DB 1; Length 92;
Best Local Similarity 100.0%; Pred. No. 8.88e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 72 qvcadpseswvq 83
QY 1 QVCADPSESWSVQ 12

RESULT 9
ID W76225 standard; Protein; 92 AA.
AC W76225;
DT 02-DEC-1998 (first entry)
DE Human chemokine MIP-1beta domain protein fragment.
KW Chemokine; MIP-1beta; chimeric; human; heterologous protein; inhibitor;
KW receptor; chemotaxis; migratory cell; angiogenesis; bone; regeneration;
KW cartilage; ligament; tendon; bone marrow; transplant; inflammation;
KW autoimmune disorder; vaccine adjuvant; antigen presenting cell; cancer;
KW HIV; human immunodeficiency virus; therapy; prevention.
OS Homo sapiens.
OS Synthetic.
PN W09838212-A2.
PD 03-SEP-1998.
PF 27-FEB-1998; U04002.
PR 28-FEB-1997; US-808720.
PA (GEM ) GENETICS INST INC.
PI Herrmann SH, Swanberg SL;
PI WPI; 98-495387/42.
DR New chimeric polypeptide(s) - comprise chemokine polypeptide
PT covalently linked to heterologous polypeptide, used for, e.g.
PT chemotactic recruitment of migratory cells
PS Example 1; Page 53; 69pp; English.
CC This sequence represents a human chemokine MIP-1beta domain, derived
CC from HUMACT2A. This sequence is used in the production of a construct
CC comprising an isolated polynucleotide encoding a chimeric polypeptide
CC which comprises at least 1 chemokine polypeptide covalently attached to
CC at least 1 heterologous polypeptide. By including a heterologous protein
CC in the construction, the chimeric polypeptides will have longer and
CC increased biological activity and can direct the chemokine to a
CC particular site. The chimeric polypeptides can also be designed to
CC inhibit or desensitize chemokine receptors. They can be used to affect
CC the chemotactic recruitment of migratory cells, e.g. for stimulating or
CC inhibiting angiogenesis, for regeneration of bone, cartilage, ligament or
CC tendon, for recruiting transplanted bone marrow cells to bone marrow, or
CC for treating or preventing inflammatory or autoimmune disorders. They can
CC also be used as vaccine adjuvants or to enhance the activity of antigen
CC presenting cells and for treating or preventing HIV infection.
CC Neutralising antibodies binding to the chimeric polypeptide may also be
CC useful therapeutically for both conditions associated with the chemokine
CC corresponding to the chemokine domain of the chimeric polypeptide and
CC also in the treatment of some forms of cancer where abnormal expression
CC of the chemokine is involved.
SQ Sequence 92 AA;

Query Match 100.0%; Score 91; DB 35; Length 92;
Best Local Similarity 100.0%; Pred. No. 8.88e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 72 qvcadpseswvq 83

DR N-PSDB: Q03684.
PT New lymphokine-cytokine genes -
PT isolated using mRNA from activated human peripheral blood
PT mononuclear cells and T cells.
PS Disclosure; 184pp; English.
CC The lymphokine/cytokine-like proteins are associated with the
CC inflammatory response and/or have mitogenic activities. Antigens
CC raised to the proteins may be useful in detection and purification,
CC especially in bioassays of various tumour cells or genetic defects
CC in the inflammatory response.
CC The best copy of the sequence available is still unclear and some
CC errors in the sequence may occur.
SQ Sequence 92 AA;

Query Match 100.0%; Score 91; DB 1; Length 92;
Best Local Similarity 100.0%; Pred. No. 8.88e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 72 qvcadpseswvq 83
QY 1 QVCADPSESWSVQ 12

RESULT 10
ID R70798 standard; Protein; 92 AA.
AC R70798;
DT 29-AUG-1995 (first entry)
DE MIP-1-beta.
KW Macrophage inflammatory protein 1-beta; MIP-1-beta;
KW heparanase; heparin; heparan sulfate; arthritis; restenosis;
KW cancer; wound healing.
OS Homo sapiens.
PN W09504158-A.
PD 09-FEB-1995.
PF 26-JUL-1994; U08207.
PR 29-JUL-1993; US-099866.
PR 13-OCT-1993; US-136117.
PA (UPJO ) UPOJHN CO.
PA Hoogwerf AJ, Ledbetter SR;
PA WPI; 95-082239/11.
DR N-PSDB; Q85368.
PT Screening for cpds. with anti-heparanase activity - by detecting
PT inhibition of heparin or heparan sulphate degradation,
PT potentially useful for treating arthritis, restenosis, cancer.
PS Claim 13; Page 47; 60pp; English.
CC Purified heparanases, prepared under reducing conditions and
CC activated with transglutaminase, are given in R70786-804. Most
CC are prepared by reverse transcription of mRNA from activated human
CC leukocytes, then cloning of the cDNA into pVL1392 baculovirus
CC vector, and expression in Sf9 cells in the presence of reduced
CC glutathione and dithiothreitol.
SQ Sequence 92 AA;

Query Match 100.0%; Score 91; DB 13; Length 92;
Best Local Similarity 100.0%; Pred. No. 8.88e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 72 qvcadpseswvq 83
QY 1 QVCADPSESWSVQ 12

RESULT 11
ID R05900 standard; protein; 92 AA.
AC R05900;
DT 27-NOV-1990 (first entry)
DE Act-2 gene product.
KW Act-2; human lymphokine/cytokine-like protein; mitogenic; ds.
OS Homo sapiens.
PN W09007009-A.
PD 28-JUN-1990.
PF 15-DEC-1989; U05603.
PF 16-DEC-1988; US-285489.
PA (USDC ) US SEC OF COMMERCE.
PI SIEBENLIST U, ZIPFEL PE, KELLEY K, IRVING SG, NAPOLITANO M,
PI LEONARD WT;
PI WPI; 90-224535/29.
DR N-PSDB; Q05297.
PT New lymphokine-cytokine-like genes - isolated by subtraction
PT cloning and hybridisation using mRNA from activated peripheral
PT blood T cells.
PS Disclosure; 137pp; English.
CC Probes raised to the gene product may be used in bioassay of the
CC product, useful in detecting tumour cells, genetic defects in the
CC inflammatory response, or in vivo, for the detection of immune
CC system activation. The proteins may also be used to determine the
CC presence of their receptors.
SQ Sequence 92 AA;

Query Match 100.0%; Score 91; DB 1; Length 92;
Best Local Similarity 100.0%; Pred. No. 8.88e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 72 qvcadpseswvq 83
QY 1 QVCADPSESWSVQ 12

```

Db 72 qvcadpseswvq 83
 QY 1 QVCADPSESWSVQ 12

RESULT 12

ID R05903 standard; protein; 93 AA.
 AC R05903;
 DT 27-NOV-1990 (first entry)
 DE PAT 744 gene product.
 KW Act-2; human lymphokine/cytokine-like protein; mitogenic; ds.
 OS Homo sapiens.
 PN W09007009-A.
 PD 28-JUN-1990.
 PR 15-DEC-1989; U05603.
 PR 16-DEC-1988; US-285489.
 PA (USDC) US SEC OF COMMERCE.
 PI SIEBENLIST U, ZIFFEL PE, KELLEY K, IRVING SG, NAPOLITANO M,
 PI LEONARD WJ;
 DR WPI; 90-224535/29.
 DR N-PSDB; Q05299.
 PT New lymphokine-cytokine-like genes - isolated by subtraction
 PT cloning and hybridisation using mRNA from activated peripheral
 PT blood T cells.
 PS Disclosure; 137pp; English.
 CC Probes raised to the gene product may be used in bioassay of the
 CC product, useful in detecting tumour cells, genetic defects in the
 CC inflammatory response, or in vivo, for the detection of immune
 CC system activation. The proteins may also be used to determine the
 CC presence of their receptors.
 SQ Sequence 93 AA;

Query Match 100.0%; Score 91; DB 1; Length 93;
 Best Local Similarity 100.0%; Pred. No. 8.88e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 73 qvcadpseswvq 84
 QY 1 QVCADPSESWSVQ 12

RESULT 13

ID W76223 standard; Protein; 331 AA.
 AC W76223;
 DT 02-DEC-1998 (first entry)
 DE Human chemokine MIP-1beta domain protein from clone MPB-X.
 KW Chemokine; MIP-1beta; chimeric; human; heterologous protein; inhibitor;
 KW receptor; chemotaxis; migratory cell; angiogenesis; bone; regeneration;
 KW cartilage; ligament; tendon; bone marrow; transplant; inflammation;
 KW autoimmune disorder; vaccine adjuvant; antigen presenting cell; cancer;
 KW HIV; human immunodeficiency virus; therapy; prevention.
 OS Homo sapiens.
 OS Synthetic.
 FH Key
 FT Peptide
 FT /label= signal
 FT /note= "signal peptide"
 FT 25..331
 FT Protein
 FT /label= MIP-1beta
 FT /note= "Chemokine domain"
 PN W09838212-A2.
 PD 03-SEP-1998.
 PR 27-FEB-1998; U04002.
 PR 28-FEB-1997; US-808720.
 PA (GENY) GENETICS INST INC.
 PI Herrmann SH, Swanberg SL;
 DR WPI; 98-495387/42.
 DR N-PSDB; V56825.
 PT New chimeric polypeptide(s) - comprise chemokine polypeptide
 PT covalently linked to heterologous polypeptide, used for, e.g.
 PT chemotactic recruitment of migratory cells
 PS Claim 16c; Page 50-51; 69pp; English.

CC This sequence represents a human chemokine MIP-1beta domain, isolated
 CC from cDNA clone MPB-X. This sequence is used in the production of a
 CC construct comprising an isolated polynucleotide encoding a chimeric
 CC polypeptide which comprises at least 1 chemokine polypeptide covalently
 CC attached to at least 1 heterologous polypeptide. By including a
 CC heterologous protein in the construction, the chimeric polypeptides will
 CC have longer and increased biological activity and can direct the
 CC chemokine to a particular site. The chimeric polypeptides can also be
 CC designed to inhibit or desensitise chemokine receptors. They can be used
 CC to affect the chemotactic recruitment of migratory cells, e.g. for
 CC stimulating or inhibiting angiogenesis, for regeneration of bone,
 CC cartilage, ligament or tendon, for recruiting transplanted bone marrow
 CC cells to bone marrow, or for treating or preventing inflammatory or
 CC autoimmune disorders. They can also be used as vaccine adjuvants or to
 CC enhance the activity of antigen presenting cells and for treating or
 CC preventing HIV infection. Neutralising antibodies binding to the chimeric
 CC polypeptide may also be useful therapeutics for both conditions
 CC associated with the chemokine corresponding to the chemokine domain of
 CC the chimeric polypeptide and also in the treatment of some forms of
 CC cancer where abnormal expression of the chemokine is involved.
 SQ Sequence 331 AA;

Query Match 100.0%; Score 91; DB 35; Length 331;
 Best Local Similarity 100.0%; Pred. No. 8.88e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 72 qvcadpseswvq 83
 QY 1 QVCADPSESWSVQ 12

RESULT 14

ID R38948 standard; Protein; 66 AA.
 AC R38948;
 DT 23-NOV-1993 (first entry)
 DE NL-3 LD78.
 KW SCI; stem cell inhibition; LD78; ACT2; MIP-1alpha;
 KW macrophage inflammatory protein; multimer; tumour therapy;
 KW psoriasis; hyperproliferation.
 OS Homo sapiens.
 PN W09313206-A.
 PD 08-JUL-1993.
 PR 23-DEC-1992; G02390.
 PR 23-DEC-1991; GB-027319.
 PR 14-OCT-1992; GB-021587.
 PA (BRRI-) BRITISH BIO-TECHNOLOGY LTD.
 PI Craig S, Czaplowski LG, Edwards RM, Gilbert RJ;
 PI Hunter MG;
 PI WPI; 93-227322/28.
 DR Protein with stem cell inhibition activity, e.g. LD78 or MIP-1
 PT alpha - unable to form stable multimer higher than dodecamer,
 PT providing better tissue penetration
 PT Example 23; Page 58; 294pp; English.
 PS Analogues of natural stem cell inhibitors, such as LD78 and MIP-
 CC 1alpha, having mutations to prevent or reduce multimer formation
 CC beyond certain stages (e.g. dodecamer), have improved solution
 CC properties leading to enhanced productivity and greater therapeutic
 CC utility as stem cell protective agents. The analogues may be used
 CC in tumour therapy, psoriasis or other diseases involving hyper-
 CC proliferative stem cells.
 CC Most pref. LD78 analogues are Phe12>Gln, Lys44>Ser, Arg17>Glu (with
 CC Gln18>Glu) and, esp., Asp26>Ala and Glu66>Ser. Pref. MIP-1alpha
 CC analogues correspond to the pref. LD78 analogues.
 SQ Sequence 66 AA;

Query Match 94.5%; Score 86; DB 7; Length 66;
 Best Local Similarity 91.7%; Pred. No. 2.65e-01;
 Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 45 qvcadpseswvq 56
 QY 1 QVCADPSESWSVQ 12

RESULT 15
 ID R39146 standard; Protein; 69 AA.
 AC R39146;
 DT 23-NOV-1993 (first entry)
 DE LD78 Arg17>Glu.
 KW SCT; stem cell inhibition; LD78; ACT2; MIP-lalpha;
 KW macrophage inflammatory protein; multimer; tumour therapy;
 KW psoriasis; hyperproliferation.
 OS Homo sapiens.
 PN W09313206-A.
 PD 08-JUL-1993.
 PF 23-DEC-1992; G02390.
 PR 23-DEC-1991; GB-027319.
 PR 14-OCT-1992; GB-021587.
 PA (BRBI-) BRITISH BIO-TECHNOLOGY LTD.
 PI Craig S, Czaplewski LG, Edwards RM, Gilbert RJ;
 PI Hunter MG;
 DR WPI; 93-227322/28.
 PT Protein with stem cell inhibition activity, e.g. LD78 or MIP-1
 PT alpha - unable to form stable multimer higher than dodecamer,
 PT providing better tissue penetration
 PS Example 124; Page 94; 294pp; English.
 CC Analogues of natural stem cell inhibitors, such as LD78 and MIP-
 CC lalpha, having mutations to prevent or reduce multimer formation
 CC beyond certain stages (e.g. dodecamer), have improved solution
 CC properties leading to enhanced productivity and greater therapeutic
 CC utility as stem cell protective agents. The analogues may be used
 CC in tumour therapy, psoriasis or other diseases involving hyper-
 CC proliferative stem cells.
 CC Most pref. LD78 analogues are Phe12>Gln, Lys44>Ser, Arg17>Glu (with
 CC Gln18>Glu) and, esp., Asp26>Ala and Glu66>Ser. Pref. MIP-lalpha
 CC analogues correspond to the pref. LD78 analogues.
 SQ Sequence 69 AA;

Query Match 94.5%; Score 86; DB 7; Length 69;
 Best Local Similarity 91.7%; Pred. No. 2.65e-01;
 Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 48 qvcadpseewvq 59
 |||||
 QY 1 QVCADPSESVMQ 12

Search completed: Fri Feb 4 17:32:29 2000
 Job time : 19 secs.

CC -!- INDUCTION: BY TNF-ALPHA.
 CC -!- TISSUE SPECIFICITY: ENDOTHELIUM OF SMALL VEINS AND INTRAFASCICULAR
 CC VEINS, AND INFILTRATING LEUKOCYTES.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC -----
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 CC or send an email to license@isb-sib.ch).
 CC -----
 CC EMBL; U29553; G1144186; -.
 CC PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 CC PFAM; PF00048; i18; 1.
 CC HSSP; P13500; 1DON.
 CC CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE.
 CC SIGNAL 1 23 BY SIMILARITY.
 CC CHAIN 24 101 MONOCYTE CHEMOTACTIC PROTEIN 1.
 CC MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
 CC SIMILARITY).
 CC DISULFID 34 59 BY SIMILARITY.
 CC DISULFID 35 75 BY SIMILARITY.
 CC SEQUENCE 101 AA; 11121 MW; A7075B14 CRC32;
 CC -----
 CC Query Match 96.9%; Score 93; DB 1; Length 101;
 CC Best Local Similarity 91.7%; Pred. No. 3.40e-09;
 CC Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
 CC -----
 CC Db 73 EICADPKKQWQ 84
 CC | | | | | | | | | |
 CC Qy 1 EICADPKKQWQ 12
 CC -----
 CC RESULT 4
 CC ID MCPL_PIG STANDARD; PRT; 99 AA.
 CC AC P42831.
 CC DT 01-NOV-1995 (REL. 32, CREATED)
 CC DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
 CC DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 CC DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1).
 CC GN SCYA2.
 CC OS SUS SCROFA (PIG).
 CC OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC OC ARTIODACTILA; SULIFORMES; SUINA; SUIDAE; SUS.
 CC RN [1]
 CC RP SEQUENCE FROM N.A.
 CC RX MEDLINE; 94183284.
 CC RA HOSANG K., KNOKE I., KLAUDINY J., WEMPE F., WUTTKE W., SCHEIT K.H.;
 CC RT "Porcine luteal cells express monocyte chemoattractant protein-1
 CC (MCP-1): analysis by polymerase chain reaction and cDNA cloning.";
 CC RL BIOCHEM. BIOPHYS. RES. COMMUN. 199;962-968(1994).
 CC RN [2]
 CC RP SEQUENCE FROM N.A.
 CC RC TISSUE-BRAIN;
 CC RA ZACH O.R.F.;
 CC RL SUBMITTED (JUL-1994) TO EMBL/GENBANK/DBJ DATA BANKS.
 CC CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
 CC NEUTROPHILS.
 CC CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
 CC CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC -----
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 CC or send an email to license@isb-sib.ch).
 CC -----

DR EMBL; Z48479; G683717; -.
 DR EMBL; X79416; G872313; -.
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSSP; P13500; 1DON.
 DR CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE.
 DR SIGNAL 1 23 BY SIMILARITY.
 DR CHAIN 24 99 MONOCYTE CHEMOTACTIC PROTEIN 1.
 DR MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
 DR SIMILARITY).
 DR DISULFID 34 59 BY SIMILARITY.
 DR DISULFID 35 75 BY SIMILARITY.
 DR SEQUENCE 99 AA; 10976 MW; ECC3AFB4 CRC32;
 DR -----
 DR Query Match 95.8%; Score 92; DB 1; Length 99;
 DR Best Local Similarity 83.3%; Pred. No. 6.13e-09;
 DR Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
 DR -----
 DR Db 73 EICADPKKQWQ 84
 DR | | | | | | | | | |
 DR Qy 1 EICADPKKQWQ 12
 DR -----
 DR RESULT 5
 DR ID MCP2_BOVIN STANDARD; PRT; 99 AA.
 DR AC Q09141;
 DR DT 01-NOV-1995 (REL. 32, CREATED)
 DR DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
 DR DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DR DE MONOCYTE CHEMOTACTIC PROTEIN 2 PRECURSOR (MCP-2) (MONOCYTE
 DR CHEMOATTRACTANT PROTEIN 2).
 DR GN SCYA8 OR MCP2.
 DR OS BOS TAURUS (BOVINE).
 DR OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 DR OC ARTIODACTILA; RUMINANTIA; PECORA; BOVOIDEA; BOVIDAE; BOS.
 DR RN [1]
 DR RP SEQUENCE FROM N.A.
 DR RX MEDLINE; 94114084.
 DR RA WEMPE F., HANES J., SCHEIT K.H.;
 DR RT "Cloning of the gene for bovine monocyte chemoattractant protein-2";
 DR RL DNA CELL BIOL. 13;1-8(1994).
 CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES. THIS PROTEIN
 CC CAN BIND HEPARIN.
 CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC -----
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 CC or send an email to license@isb-sib.ch).
 CC -----
 CC EMBL; S67954; E118856; -.
 CC EMBL; S67956; G544997; -.
 CC PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 CC PFAM; PF00048; i18; 1.
 CC HSSP; P80098; 1NCV.
 CC CYTOKINE; CHEMOTAXIS; SIGNAL; HEPARIN-BINDING; INFLAMMATORY RESPONSE.
 CC SIGNAL 1 23 BY SIMILARITY.
 CC CHAIN 24 99 MONOCYTE CHEMOTACTIC PROTEIN 2.
 CC MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
 CC SIMILARITY).
 CC DISULFID 34 59 BY SIMILARITY.
 CC DISULFID 35 75 BY SIMILARITY.
 CC SEQUENCE 99 AA; 10900 MW; 9BA2CD26 CRC32;
 CC -----
 CC Query Match 93.8%; Score 90; DB 1; Length 99;
 CC Best Local Similarity 75.0%; Pred. No. 1.98e-08;
 CC Matches 9; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 73 DVCADPKKWKVQ 84
:|||||:|||||
QY 1 EICADPKKWKVQ 12

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RESULT 6
ID EOTA_MOUSE STANDARD; PRT; 97 AA.
AC P48298;
DT 01-FEB-1996 (REL. 33, CREATED)
DT 01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE EOTAXIN PRECURSOR (EOSINOPHIL CHEMOTACTIC PROTEIN).
GN SCYALL.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE: 96004658.
RA ROTHENBERG M.E., LUSTER A.D., LEDER P.;
RT "murine eotaxin: an eosinophil chemoattractant inducible in
RT endothelial cells and in interleukin 4-induced tumor suppression.";
RL PROC. NATL. ACAD. SCI. U.S.A. 92:8960-8964(1995).
RN [2]
RP SEQUENCE FROM N.A.
RX STRAIN=C57BL/6J; TISSUE=LUNG;
RX MEDLINE: 96158746.
RA GONZALO J.-A., JIA G.-Q., AGUIRRE V., FRIEND D., COYLE A.J.,
RA JENKINS N.A., LIN G.-S., KATZ H., LICHTMAN A., COPELAND N.G., KOPF M.,
RA GUTIERREZ-RAMOS J.-C.;
RT "mouse eotaxin expression parallels eosinophil accumulation during
RT lung allergic inflammation but it is not restricted to a Th2-type
RT response.";
RL IMMUNITY 4:1-14(1996).
CC -!- FUNCTION: IN RESPONSE TO THE PRESENCE OF ALLERGENS, THIS PROTEIN
CC DIRECTLY PROMOTES THE ACCUMULATION OF EOSINOPHILS (A PROMINENT
CC FEATURE OF ALLERGIC INFLAMMATORY REACTIONS), BUT NOT
CC LYMPHOCYTES, MACROPHAGES OR NEUTROPHILS.
CC -!- SUBCELLULAR LOCATION: EXTRACELLULAR.
CC -!- TISSUE SPECIFICITY: EXPRESSED CONSTITUTIVELY IN THE THYMUS.
CC EXPRESSION INDUCIBLE IN THE LUNG (TYPE I ALVEOLAR EPITHELIAL
CC CELLS), INTESTINE, HEART, SPLEEN, KIDNEY.
CC -!- INDUCTION: BY INTERFERON-GAMMA AND LIPOPOLYSACCHARIDE (LPS).
CC -!- PM: O-GLYCOSYLATED (PROBABLE).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC
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CC
CC EMBL: U26426; G995911; -.
CC EMBL: U40672; G1113937; -.
CC MGD; MGI:103576; SCYALL.
CC PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
CC PFAM: PF00048; 118; 1.
CC HSSP: P80098; 1NCV.
CC EOSINOPHIL; CYTOKINE; CHEMOTAXIS; GLYCOPROTEIN; SIGNAL;
CC INFLAMMATORY RESPONSE.
CC SIGNAL 1 23 POTENTIAL.
CC CHAIN 24 97 EOTAXIN.
CC FT DISULFID 32 57 BY SIMILARITY.
CC FT DISULFID 33 73 BY SIMILARITY.
CC FT CARBOHYD 94 94 POTENTIAL.
CC FT CONFLICT 3 3 L -> S (IN REF. 2).
CC SQ SEQUENCE 97 AA; 10893 MW; F85A96BC CRC32;
CC
CC Query Match 92.7%; Score 89; DB 1; Length 97;
CC Best Local Similarity 91.7%; Pred. No. 3.55e-08;
CC Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Db 71 EICADPKKWKVQ 82
|||||:|||||
QY 1 EICADPKKWKVQ 12

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RESULT 7
ID EOTA_MOUSE STANDARD; PRT; 97 AA.
AC P97545; O08780;
DT 15-JUL-1998 (REL. 36, CREATED)
DT 15-JUL-1998 (REL. 36, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE EOTAXIN PRECURSOR (EOSINOPHIL CHEMOTACTIC PROTEIN).
OS RATIUS NORVEGICUS (RAT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATIUS.
RN [1]
RP SEQUENCE FROM N.A.
RA WILLIAMS C.M., NEWTON D.J., WILSON S.A., COLEMAN J.C.,
RA FLANAGAN B.F.;
RL SUBMITTED (DEC-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [2]
RP SEQUENCE FROM N.A.
RX TISSUE=LUNG;
RA ISHII Y.;
RL SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -!- FUNCTION: IN RESPONSE TO THE PRESENCE OF ALLERGENS, THIS PROTEIN
CC DIRECTLY PROMOTES THE ACCUMULATION OF EOSINOPHILS, A PROMINENT
CC FEATURE OF ALLERGIC INFLAMMATORY REACTIONS (BY SIMILARITY).
CC -!- SUBCELLULAR LOCATION: EXTRACELLULAR.
CC -!- PM: O-GLYCOSYLATED (PROBABLE).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC
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CC or send an email to license@isb-sib.ch).
CC
CC EMBL: Y08358; E274141; -.
CC EMBL: U96637; G2098785; -.
CC PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
CC PFAM: PF00048; 118; 1.
CC HSSP: P80098; 1NCV.
CC EOSINOPHIL; CYTOKINE; CHEMOTAXIS; GLYCOPROTEIN; SIGNAL;
CC INFLAMMATORY RESPONSE.
CC SIGNAL 1 23 POTENTIAL.
CC CHAIN 24 97 EOTAXIN.
CC FT DISULFID 32 57 BY SIMILARITY.
CC FT DISULFID 33 73 BY SIMILARITY.
CC FT CARBOHYD 94 94 POTENTIAL.
CC FT CONFLICT 3 3 L -> S (IN REF. 2).
CC SQ SEQUENCE 97 AA; 10851 MW; 05B4ED45 CRC32;
CC
CC Query Match 92.7%; Score 89; DB 1; Length 97;
CC Best Local Similarity 91.7%; Pred. No. 3.55e-08;
CC Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Db 71 EICADPKKWKVQ 82
|||||:|||||
QY 1 EICADPKKWKVQ 12

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RESULT 8
ID MCP5_MOUSE STANDARD; PRT; 104 AA.
AC O62401;
DT 01-NOV-1997 (REL. 35, CREATED)
DT 01-NOV-1997 (REL. 35, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 5 PRECURSOR (MCP-5) (MCP-1 RELATED

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CC      C-C) (CHEMOKINE CC).
CC      -----
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CC      or send an email to license@isb-sib.ch).
CC      -----
CC      EMBL; U46573; G1280141; -.
CC      EMBL; U34780; G1185440; -.
CC      EMBL; D49372; G1552241; -.
CC      EMBL; Z69291; E221070; -.
CC      EMBL; Z75668; E251275; -.
CC      EMBL; Z75669; E351258; -.
CC      EMBL; U46572; G2088509; -.
CC      EMBL; Z92709; E329504; -.
CC      MIN; 601156; -.
CC      PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
CC      PFAM; PF00048; i18; 1.
CC      PDB; 2EOT; 11-NOV-98.
CC      EOSINOPHIL; CYTOKINE; CHEMOTAXIS; GLYCOPROTEIN; SIGNAL;
KW      INFLAMMATORY RESPONSE; POLYMORPHISM; 3D-STRUCTURE.
FT      SIGNAL          1 23
FT      CHAIN           24 97      EOTAXIN.
FT      DISULFID        32 57
FT      DISULFID        33 73
FT      VARIANT         7 7      L -> P (IN CLONE 34).
FT      VARIANT        23 23      A -> T (IN CLONE 53).
FT      VARIANT        51 51      R -> S (IN CLONE 34).
FT      VARIANT        79 79      K -> R (IN CLONE 53).
FT      SEQUENCE       97 AA; 10732 MW; 6C0F3D98 CRC32;
SQ
Query Match          91.7%; Score 88; DB 1; Length 97;
Best Local Similarity 83.3%; Pred. No. 6.34e-08;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 71 DICADPKKKKQVQ 82
QY 1 EICADPKKKKQVQ 12

RESULT 10
ID MCPA_BOVIN STANDARD; PRT; 99 AA.
AC P28291.
DT 01-DEC-1992 (REL. 24, CREATED)
DT 01-DEC-1992 (REL. 24, LAST SEQUENCE UPDATE)
DT 01-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 1A PRECURSOR (MCP-1A) (ACIDIC
DE SEMINAL FLUID PROTEIN).
OS BOS TAURUS (BOVINE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC ARTIODACTYLIA; RUMINANTIA; PECORA; BOVOIDEA; BOVINAE; BOS.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-SEMINAL PLASMA;
RX WEMPE F., HENSCHEN A., SCHEIT K.H.;
RA MEDLINE; 92096117.
RT "Gene expression and cDNA cloning identified a major basic protein
RT constituent of bovine seminal plasma as bovine
RT monocyte-chemoattractant protein-1 (MCP-1).";
RL DNA CELL BIOL. 10:671-679(1991).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE-SEMINAL PLASMA;
RX WEMPE F., HENSCHEN A., SCHEIT K.H.;
RA MEDLINE; 92181448.
RT "Characterization by cDNA cloning of the mRNA of a new growth factor
RT from bovine seminal plasma: acidic seminal fluid protein.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 183:232-237(1992).
RN [3]
RP SEQUENCE FROM N.A.

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RX MEDLINE; 94338337.
RA WEMPE F., KUHLMANN J.K., SCHEIT K.H.;
RT "Characterization of the bovine monocyte chemoattractant protein-1
RT gene.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 202:1272-1279(1994).
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
CC NEUTROPHILS.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC -----
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CC      -----
CC      EMBL; L32659; G624394; -.
CC      EMBL; M84602; G163395; -.
CC      PIR; A39296; A39296.
CC      PIR; JC2336; JC2336.
CC      PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
CC      PFAM; PF00048; i18; 1.
CC      HSSP; P13500; 1DON.
KW      CYTOKINE; CHEMOTAXIS; SIGNAL.
FT      SIGNAL          1 23      BY SIMILARITY.
FT      CHAIN           24 99      MONOCYTE CHEMOTACTIC PROTEIN 1A.
FT      MOD_RES         24 24      PYRROLIDONE CARBOXYLIC ACID (BY
FT      DISULFID        34 59      SIMILARITY).
FT      DISULFID        35 75      BY SIMILARITY.
FT      SEQUENCE       99 AA; 11114 MW; C8F5821D CRC32;
SQ
Query Match          91.7%; Score 88; DB 1; Length 99;
Best Local Similarity 83.3%; Pred. No. 6.34e-08;
Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 73 ELCADPKKKKQVQ 84
QY 1 EICADPKKKKQVQ 12

RESULT 11
ID IL8_CANFA STANDARD; PRT; 101 AA.
AC P41324.
DT 01-FEB-1995 (REL. 31, CREATED)
DT 01-FEB-1995 (REL. 31, LAST SEQUENCE UPDATE)
DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
DE INTERLEUKIN-8 PRECURSOR (IL-8).
GN IL8
OS CANIS FAMILIARIS (DOG).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC CARNIVORA; FISSIPEDIA; CANIDAE; CANIS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 94010328.
RA ISHIKAWA J., SUZUKI S., HOTTA K., HIROTA Y., MIZUNO S., SUZUKI K.;
RT "Cloning of a canine gene homologous to the human
RT interleukin-8-encoding gene.";
RL GENE 131:305-306(1993).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE-LYMPH NODE;
RX MEDLINE; 95127913.
RA MATSUMOTO Y., MOHAMED A., ONODERA T., KATO H., OHASHI T.,
RA GOITSUKA R., TSUJIMOTO H., HASEGAWA A., FURUSAWA S., YOSHITARA K.,
RA ISHIKAWA J., HOTTA K., SUZUKI K., HIROTA Y.;
RT "Molecular cloning and expression of canine interleukin 8 cDNA.";
RL CYTOKINE 6:455-461(1994).
RN [3]
RP SEQUENCE FROM N.A.
RC STRAIN-MONGREL; TISSUE-JUGULAR VEIN;

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RX MEDLINE; 95114148.
 RA KUDIELKA G.L., SMITH W.C., LAROSA G.J., MANNING A.M.,
 RA MENDOZA L.H., DALY T.J., HUGHES B.J., YOUNGER K.A., HAWKINS H.K.,
 RA MICHAEL L.H., ROT A., ENTMAN M.L.;
 RT "Interleukin-8 gene induction in the myocardium after ischemia and
 RT reperfusion in vivo";
 RL J. CLIN. INVEST. 95:89-103(1994).
 RN [4]
 RP SEQUENCE FROM N.A.
 RC STRAIN-BEAGLE;
 RX MEDLINE; 97230298.
 RA STRAUBINGER R.K., STRAUBINGER A.F., HARTER L., JACOBSON R.H.,
 RA CHANG Y.-F., SUMMERS B.A., ERB H.N., APPEL M.J.;
 RT Borrelia burgdorferi migrates into joint capsules and causes an up-
 RT regulation of interleukin-8 in synovial membranes of dogs
 RT experimentally infected with ticks.;
 RL INFECT. IMMUN. 65:1273-1285(1997).
 CC -!- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,
 CC BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
 CC NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
 CC RESPONSE TO AN INFLAMMATORY STIMULUS.
 CC -!- SUBUNIT: HOMODIMER.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).
 CC -----
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 CC -----
 DR EMBL; D28772; G517100; -;
 DR EMBL; D14285; G475152; -;
 DR EMBL; U10308; G607814; -;
 DR EMBL; AF048717; G2935472; -;
 DR PFAM; PF00048; i18; 1.
 DR HSP; P10145; i1KL.
 KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 FT SIGNAL 1 22 BY SIMILARITY.
 FT CHAIN 23 101 INTERLEUKIN-8.
 FT DISULFID 34 61 BY SIMILARITY.
 FT DISULFID 36 77 BY SIMILARITY.
 SQ SEQUENCE 101 AA; 11280 MW; 76496222 CRC32;
 Query Match 90.6%; Score 87; DB 1; Length 101;
 Best Local Similarity 83.3%; Pred. No. 1.13e-07;
 Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
 Db 75 EVCLDPKKEKWKQ 86
 QY 1 EICADPKKEKWKQ 12
 RESULT 12
 ID IL8 SHEEP STANDARD; PRT; 101 AA.
 AC P35925;
 DT 01-JUN-1994 (REL. 29, CREATED)
 DT 01-JUN-1994 (REL. 29, LAST SEQUENCE UPDATE)
 DT 01-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)
 DE INTERLEUKIN-8 PRECURSOR (IL-8).
 GN IL8.
 OS OVIS ARIES (SHEEP).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC ARTIODACTYLA; RUMINANTIA; PECORA; BOVIDAE; CAPRINAE; OVIS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 95121931.
 RA LEGASTELOIS I., GREENLAND T., ARNAUD P., MORNEX J.F., CORDIER G.;
 RT "Sequencing of the ovine interleukin-8-encoding cDNA using the
 RT polymerase chain reaction."

RL GENE 150:367-369(1994).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 95137691.
 RA SEOW H.-F., YOSHIMURA T., WOOD P.R., COLDITZ I.G.;
 RT "Cloning, sequencing, expression and inflammatory activity in skin of
 RT ovine interleukin-8.";
 RL IMMUNOL. CELL BIOL. 72:398-405(1994).
 CC -!- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,
 CC BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
 CC NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
 CC RESPONSE TO AN INFLAMMATORY STIMULUS.
 CC -!- SUBUNIT: HOMODIMER.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).
 CC -----
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 CC -----
 DR EMBL; X78306; G463254; -;
 DR EMBL; S74436; G786591; -;
 DR PIR; S42496; S42496.
 DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSP; P10145; i1KL.
 KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 FT SIGNAL 1 22 BY SIMILARITY.
 FT CHAIN 23 101 INTERLEUKIN-8.
 FT DISULFID 34 61 BY SIMILARITY.
 FT DISULFID 36 77 BY SIMILARITY.
 SQ SEQUENCE 101 AA; 11292 MW; 5A574527 CRC32;
 Query Match 90.6%; Score 87; DB 1; Length 101;
 Best Local Similarity 83.3%; Pred. No. 1.13e-07;
 Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
 Db 75 EVCLDPKKEKWKQ 86
 QY 1 EICADPKKEKWKQ 12
 RESULT 13
 ID IL8 PIG STANDARD; PRT; 103 AA.
 AC P26894; P22951.
 DT 01-AUG-1991 (REL. 19, CREATED)
 DT 01-AUG-1991 (REL. 23, LAST SEQUENCE UPDATE)
 DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
 DE INTERLEUKIN-8 PRECURSOR (IL-8) (ALVEOLAR MACROPHAGE CHEMOTACTIC FACTOR
 DE I) (AMCF-I).
 GN IL8.
 OS SUS SCROFA (PIG).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC ARTIODACTYLA; SUIFORMES; SUINA; SUIDAE; SUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 94103307.
 RA LIN G., PEARSON A.E., SCAMURRA R.W., ZHOU Y., BAARSCH M.J.,
 RA WEISS D.J., MURTAUGH M.P.;
 RT "Regulation of interleukin-8 expression in porcine alveolar
 RT macrophages by bacterial lipopolysaccharide.";
 RL J. BIOL. CHEM. 269:77-85(1994).
 RN [2]
 RP SEQUENCE FROM N.A.
 RA SANJANWALA M.;
 RL SUBMITTED (JUL-1991) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [3]
 RP SEQUENCE FROM N.A., AND SEQUENCE OF 26-45.
 RC TISSUE=LUNG;

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RX MEDLINE: 93041741.
RA GOODMAN R.B., FOSTER D.C., MATHEWS S.L., OSBORN S.G., KUIJPER J.L.,
RA FORSTROM J.W., MARTIN T.R.;
RT "Molecular cloning of porcine alveolar macrophage-derived neutrophil
RT chemotactic factors I and II; identification of porcine IL-8 and
RT another intercrine-alpha protein";
RL BIOCHEMISTRY 31:10483-10490(1992).
RN [4]
RP REVISION TO 23.
RA GOODMAN R.B.;
RL SUBMITTED (MAR-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [5]
RP SEQUENCE OF 26-45.
RC STRAIN=YORKSHIRE;
RX MEDLINE: 91217086.
RA GOODMAN R.B., FORSTROM J.W., OSBORN S.G., CHI E.Y., MARTIN T.R.;
RT "Identification of two neutrophil chemotactic peptides produced by
RT porcine alveolar macrophages";
RL J. BIOL. CHEM. 266:8455-8463(1991).
CC [1]- FUNCTION: IL-8 IS A CHEMOTACTIC FACTOR THAT ATTRACTS NEUTROPHILS,
CC BASOPHILS, AND T-CELLS, BUT NOT MONOCYTES. IT IS ALSO INVOLVED IN
CC NEUTROPHIL ACTIVATION. IT IS RELEASED FROM SEVERAL CELL TYPES IN
CC RESPONSE TO AN INFLAMMATORY STIMULUS.
CC [1]- SUBUNIT: HOMODIMER.
CC [1]- TISSUE SPECIFICITY: ALVEOLAR MACROPHAGES.
CC [1]- INDUCTION: BY LIPOPOLYSACCHARIDE.
CC [1]- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CXC).
CC -----
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CC -----
DR EMBL: M86923; G164521; -.
DR EMBL: X61151; G516197; -.
DR EMBL: M99367; G1235612; -.
DR PIR: A4253; A44253.
DR PIR: A39819; A39819.
DR PROSITE: PS00471; SMALL_CYTOKINES_CXC; 1.
DR PFAM: PF00048; 118; 1.
DR HSP: P10145; 118; 1.
DR CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
KW SIGNAL 1 25
FT CHAIN 26 103 INTERLEUKIN-8.
FT DISULFID 34 61 BY SIMILARITY.
FT DISULFID 36 77 BY SIMILARITY.
FT CONFLICT 33 34 RC -> CR (IN REF. 5).
FT CONFLICT 87 87 K -> KK (IN REF. 2).
SQ SEQUENCE 103 AA; 11633 MW; A012D59D CRC32;

Query Match 90.6%; Score 87; DB 1; Length 103;
Best Local Similarity 83.3%; Pred. No. 1.13e-07;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 75 EVCLDPKPKWKQ 86
QY 1 EICADPKKWKQ 12

RESULT 14
ID MCP1_RABIT STANDARD; PRT; 125 AA.
AC P28292;
DT 01-DEC-1992 (REL. 24, CREATED)
DT 01-DEC-1992 (REL. 24, LAST SEQUENCE UPDATE)
DE 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1).
GN SCY2.
OS ORYCTOLAGUS CUNICULUS (RABBIT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;

Query Match 90.6%; Score 87; DB 1; Length 125;
Best Local Similarity 90.9%; Pred. No. 1.13e-07;
Matches 10; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 74 ICADPKKWKQ 84
QY 2 ICADPKKWKQ 12

RESULT 15
ID M1A_RAT STANDARD; PRT; 92 AA.
AC P50229;
DT 01-OCT-1996 (REL. 34, CREATED)
DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
DE MACROPHAGE INFLAMMATORY PROTEIN 1-ALPHA PRECURSOR (MIP-1-ALPHA).
GN SCV3 OR MIPA.
OS RATTUS NORVEGICUS (RAT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=CD-1; TISSUE=LUNG;
RX MEDLINE: 95298037.
RA SHI M.M., GODLESKI J.J., PAULAKIS J.D.;
RT "Molecular cloning and posttranscriptional regulation of macrophage
RT inflammatory protein-1 alpha in alveolar macrophages.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 211:289-295(1995).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=LONG EVANS; TISSUE=LUNG;
RX MEDLINE: 95238980.
RA SHANLEY T.P., SCHMAL H., FRIEDL H.P., JONES M.L., WARD P.A.;

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OC LAGOMORPHA; LEPORIDAE; ORYCTOLAGUS.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=NEW ZEALAND WHITE; TISSUE=SPLEEN;
RX MEDLINE: 91225489.
RA YOSHIMURA T., YUHKI N.;
RT "Neutrophil attractant/activation protein-1 and monocyte
RT chemoattractant protein-1 in rabbit. cDNA cloning and their
RT expression in spleen cells.";
RL J. IMMUNOL. 146:3483-3488(1991).
CC [1]- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
CC NEUTROPHILS.
CC [1]- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
CC [1]- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC -----
DR EMBL: M57440; G165470; -.
DR PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM: PF00048; 118; 1.
DR HSP: P13500; 100N.
KW CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE; GLYCOPROTEIN.
FT SIGNAL 1 23 BY SIMILARITY.
FT CHAIN 24 125 MONOCYTE CHEMOTACTIC PROTEIN 1.
FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
FT SIMILARITY).
FT DISULFID 34 59 BY SIMILARITY.
FT DISULFID 35 75 BY SIMILARITY.
FT CARBOHYD 40 40 POTENTIAL.
FT CARBOHYD 55 55 POTENTIAL.
FT CARBOHYD 112 112 POTENTIAL.
SQ SEQUENCE 125 AA; 13776 MW; FBAC9D27 CRC32;

Query Match 90.6%; Score 87; DB 1; Length 125;
Best Local Similarity 90.9%; Pred. No. 1.13e-07;
Matches 10; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 74 ICADPKKWKQ 84
QY 2 ICADPKKWKQ 12

RESULT 15
ID M1A_RAT STANDARD; PRT; 92 AA.
AC P50229;
DT 01-OCT-1996 (REL. 34, CREATED)
DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
DE MACROPHAGE INFLAMMATORY PROTEIN 1-ALPHA PRECURSOR (MIP-1-ALPHA).
GN SCV3 OR MIPA.
OS RATTUS NORVEGICUS (RAT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=CD-1; TISSUE=LUNG;
RX MEDLINE: 95298037.
RA SHI M.M., GODLESKI J.J., PAULAKIS J.D.;
RT "Molecular cloning and posttranscriptional regulation of macrophage
RT inflammatory protein-1 alpha in alveolar macrophages.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 211:289-295(1995).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=LONG EVANS; TISSUE=LUNG;
RX MEDLINE: 95238980.
RA SHANLEY T.P., SCHMAL H., FRIEDL H.P., JONES M.L., WARD P.A.;

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WQSEH (TM)

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Mpsrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 17:38:11 2000; MasPar time 3.54 Seconds
72.063 Million cell updates/sec

Tabular output not generated.

Title: >US-09-150-813-65
Description: (1-12) from US09150813.pep
Perfect Score: 96
Sequence: 1 EICADPKKWKQ 12

Scoring table: PAM 150
Gap 15

Searched: 170751 seqs, 21266608 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: a-geneseq35

1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
14:part14 15:part15 16:part16 17:part17 18:part18
19:part19 20:part20 21:part21 22:part22 23:part23
24:part24 25:part25 26:part26 27:part27 28:part28
29:part29 30:part30 31:part31 32:part32 33:part33
34:part34 35:part35 36:part36 37:part37 38:part38
39:part39

Statistics: Mean 18.485; Variance 66.275; scale 0.279

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description	Pred. No.
1	96	100.0	71	26	Drol3+ chemokine beta	1.33e-02
2	96	100.0	75	31	Chemokine MCP-4 prote	1.33e-02
3	96	100.0	75	26	Bac 3 chemokine betal	1.33e-02
4	96	100.0	77	26	Bac 2 chemokine betal	1.33e-02
5	96	100.0	79	26	Drol1/2 chemokine bet	1.33e-02
6	96	100.0	82	24	Stem cell mobilising	1.33e-02
7	96	100.0	82	26	Bac 1 chemokine betal	1.33e-02
8	96	100.0	98	31	Human monocyte chemo	1.33e-02
9	96	100.0	98	26	Human chemokine betal	1.33e-02
10	96	100.0	98	28	Monocyte chemotactic	1.33e-02
11	96	100.0	98	17	Human chemokine beta-	1.33e-02
12	93	96.9	66	24	Monocyte chemoattract	2.71e-02
13	93	96.9	67	24	Monocyte chemoattract	2.71e-02
14	93	96.9	68	24	Monocyte chemoattract	2.71e-02
15	93	96.9	69	14	Des(2-8) MCP-1.	2.71e-02
16	93	96.9	69	24	Monocyte chemoattract	2.71e-02

17	93	96.9	76	5	R28660	MCF.	2.71e-02
18	93	96.9	76	30	W40175	Macrophage chemoattra	2.71e-02
19	93	96.9	76	14	R87677	(3-Ala) MCP-1.	2.71e-02
20	93	96.9	76	1	P90292	Peptide from human gl	2.71e-02
21	93	96.9	76	14	R87676	(24-Arg) MCP-1.	2.71e-02
22	93	96.9	76	14	R87680	Monocyte chemotactic	2.71e-02
23	93	96.9	76	21	W11131	Mature human monocyte	2.71e-02
24	93	96.9	76	10	R53398	Sense MCP-1.	2.71e-02
25	93	96.9	76	14	R87675	(28-Asp) MCP-1.	2.71e-02
26	93	96.9	76	20	W09374	Monocyte chemotactic	2.71e-02
27	93	96.9	77	15	R86859	Mature MCP-1.	2.71e-02
28	93	96.9	99	10	W40174	Macrophage chemoattra	2.71e-02
29	93	96.9	99	13	R70800	Chemoattractant prote	2.71e-02
30	93	96.9	99	5	R28663	MCF.	2.71e-02
31	93	96.9	99	14	R73914	Human monocyte chemoa	2.71e-02
32	93	96.9	99	2	P95387	Human monocyte chemo-	2.71e-02
33	89	92.7	99	2	R06398	Human MCF precursor.	6.93e-02
34	89	92.7	104	31	W56088	Murine monocyte chemo	6.93e-02
35	89	92.7	104	31	W57322	Mouse monocyte chemot	6.93e-02
36	88	91.7	76	5	R26580	Sequence of bovine P6	8.76e-02
37	88	91.7	82	29	W44721	Amino acid sequence o	8.76e-02
38	88	91.7	97	21	W00667	Pancreas expressed ch	8.76e-02
39	88	91.7	97	23	W10099	Human eotaxin.	8.76e-02
40	88	91.7	97	24	W14990	Human eosinocyte CC t	8.76e-02
41	88	91.7	99	5	R26581	Sequence of P6 precu	8.76e-02
42	86	89.6	67	14	R73915	Human monocyte chemoa	1.40e-01
43	86	89.6	99	13	R70801	Chemoattractant prote	1.40e-01
44	86	89.6	109	2	R24353	Cytokine encoded by c	1.40e-01
45	85	88.5	109	26	W26655	Human beta-chemokine	1.76e-01

ALIGNMENTS

RESULT 1
ID W22675 standard; Protein; 71 AA.
AC W22675:
DT 19-MAR-1998 (first entry)
DE Drol3+ chemokine beta10 or monocyte chemotactic protein 4 variant.
KW Human; chemokine beta10; Ck beta10; treatment; antagonist;
KW solid tumour; infection; autoimmune disease; asthma; antibody;
KW fibrotic disease; psoriasis; neurodegenerative disease;
KW wound healing; haematopoiesis regulation; gene therapy;
KW chromosome identification; monocyte chemotactic protein 4;
KW leukaemia; MCP-4; Drol3+ variant.
OS Homo sapiens.
PN W09731098-A1.
PD 28-AUG-1997.
PF 23-FEB-1996; U02598.
PR 23-FEB-1996; WO-U02598.
PA (HUMA-) HUMAN GENOME SCI INC.
PI Adams M, Alderson R, Applebaum E, Li H, Li Y, Lima SH,
PI Parmelee D, White J;
DR WPI: 97-435153/40.
PT Polypeptide encoding chemokine beta 4 and monocyte chemotactic
PT protein 4 - useful to treat tumours, autoimmune disease, infection,
PT asthma and fibrosis
PS Example 11; Fig 5; 83pp; English.
CC The present sequence is human chemokine beta10 (Ck beta10) or
CC monocyte chemotactic protein 4 (MCP-4) Drol3+ variant, which can
CC be used to treat patients deficient in Ck beta10, while a Ck beta10
CC antagonist can be used to reduce excessive levels of Ck beta10. Ck
CC beta10 can be used to treat leukaemia, solid tumours, chronic or
CC opportunistic infections, autoimmune diseases, asthma, fibrotic
CC diseases, psoriasis and neurodegenerative diseases. It also
CC promotes wound healing, regulates haematopoiesis and generates
CC antibodies. Labelled Ck beta10 can be used to identify its cognate
CC receptor, while cells expressing the receptor can be used to screen
CC compounds for (ant)agonist activity. The antagonist can be used to
CC treat rheumatoid arthritis, autoimmune, chronic inflammatory or
CC infectious diseases, allergies, prostaglandin dependent fever and
CC bone marrow failure, silicosis, sarcoidosis, hyper-eosinophilic
CC syndrome, lung inflammation and atherosclerosis. Ck beta10 cDNA can
CC be used to isolate genes encoding similar peptides, in gene therapy

CC and for chromosome identification.
SQ Sequence 71 AA;

Query Match 100.0%; Score 96; DB 26; Length 71;
Best Local Similarity 100.0%; Pred. No. 1.33e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 45 eicadpkekwwq 56
|||||
QY 1 EICADPKEKWQ 12

RESULT 2
ID W56690 standard; Protein; 75 AA.
AC W56690;
DE 23-JUL-1998 (first entry)
DE Chemokine MCP-4 protein sequence.
KW MCP-4; MCP-4 receptor; antagonist; agonist; inflammatory disease;
KW viral; bacterial; parasite; infection; allergic reaction;
KW asthmatic; atherosclerosis; arthritis; chemokine.
OS Homo sapiens.
PN WO9809171-Al.
PD 05-MAR-1998.
PF 27-AUG-1997; G02313.
PR 28-AUG-1996; GB-017923.
PA (SMIK) SMITHKLINE BEECHAM CORP.
PA (SMIK) SMITHKLINE BEECHAM PLC.
PI Bergsma D, Berkhout T, Elshourbagy N, Groot PHE,
PI White J;
DR WPI; 98-179584/16.
PT Use of the chemokine MCP-4 receptor - for identifying agonists or
PT antagonists which can be used for treating e.g. infections, allergic
PT and asthmatic reactions, atherosclerosis and arthritis
PS Disclosure; Fig 2; 25pp; English.
CC This is the chemokine MCP-4 sequence that can be used in screening
CC methods for identifying MCP-4 receptor antagonists and agonists. MCP-4
CC receptor agonists can be identified by contacting a compound with MCP-4
CC receptor and measuring the change in a functional response or a second
CC messenger system associated with the receptor. MCP-4 receptor
CC antagonists can be identified using the MCP-4 receptor in combination
CC with the chemokine MCP-4 which may be labelled or unlabelled. The MCP-4
CC receptor is expressed on the surface of a host cell or in a membrane
CC preparation and is used in the form of the isolated protein. It is
CC prepared by transfecting a mammalian cell line with an expression vector
CC comprising a nucleic acid sequence encoding the MCP-4 receptor, and
CC culturing the cell line in a culture medium. Susceptibility to disease
CC states associated with abnormal expression of the MCP-4 receptor can be
CC diagnosed by measuring the level of MCP-4 and/or MCP-3 in a sample taken
CC from a patient. Neutralising antibodies to the MCP-4 receptor can be
CC identified using MCP-4, MCP-3, RANTES, MCP-2, MCP-1 or eotaxin. The
CC agonists and antagonists identified can be used for treating disease
CC states associated with the MCP-4 receptor, e.g. inflammatory states
CC arising from viral, bacterial and parasitic infection, allergic and
CC asthmatic reactions, atherosclerosis and arthritis. The products can also
CC be used for detection and diagnosis.
SQ Sequence 75 AA;

Query Match 100.0%; Score 96; DB 31; Length 75;
Best Local Similarity 100.0%; Pred. No. 1.33e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 eicadpkekwwq 60
|||||
QY 1 EICADPKEKWQ 12

RESULT 3
ID W22673 standard; Protein; 75 AA.
AC W22673;
DE 19-MAR-1998 (first entry)
DE Bac 3 chemokine beta10 or monocyte chemotactic protein 4 variant.
KW Human; chemokine beta10; Ck beta10; treatment; antagonist;
KW solid tumour; infection; autoimmune disease; asthma; antibody;
KW wound healing; haematopoiesis regulation; gene therapy;
KW chromosome identification; monocyte chemotactic protein 4;
KW leukaemia; MCP-4; Bac 2 variant.
OS Homo sapiens.
PN WO9731098-Al.
PD 28-AUG-1997.
PF 23-FEB-1996; U02598.
PR 23-FEB-1996; WO-U02598.
PA (HUMA-) HUMAN GENOME SCI INC.
PI Adams M, Alderson R, Applebaum E, Li H, Li Y, Lima SH,
PI Parmelee D, White J;
DR WPI; 97-435153/40.
PT Polypeptide encoding chemokine beta 4 and monocyte chemotactic
PT protein 4 - useful to treat tumours, autoimmune disease, infection,
PT asthma and fibrosis
PS Example 11; Fig 5; 83pp; English.
CC The present sequence is human chemokine beta10 (Ck beta10) or
CC monocyte chemotactic protein 4 (MCP-4) Bac 3 variant, which can be
CC used to treat patients deficient in Ck beta10, while a Ck beta10
CC antagonist can be used to reduce excessive levels of Ck beta10. Ck
CC beta10 can be used to treat leukaemia, solid tumours, chronic or
CC opportunistic infections, autoimmune diseases, asthma, fibrotic
CC diseases, psoriasis and neurodegenerative diseases. It also
CC promotes wound healing, regulates haematopoiesis and generates
CC antibodies. Labelled Ck beta10 can be used to identify its cognate
CC receptor, while cells expressing the receptor can be used to screen
CC compounds for (ant)agonist activity. The antagonist can be used to
CC treat rheumatoid arthritis, autoimmune, chronic inflammatory or
CC infectious diseases, allergies, prostaglandin dependent fever and
CC bone marrow failure, silicosis, sarcoidosis, hyper-eosinophilic
CC syndrome, lung inflammation and atherosclerosis. Ck beta10 cDNA can
CC be used to isolate genes encoding similar peptides, in gene therapy
CC and for chromosome identification.
SQ Sequence 75 AA;

Query Match 100.0%; Score 96; DB 26; Length 75;
Best Local Similarity 100.0%; Pred. No. 1.33e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 eicadpkekwwq 60
|||||
QY 1 EICADPKEKWQ 12

RESULT 4
ID W22672 standard; Protein; 77 AA.
AC W22672;
DE 19-MAR-1998 (first entry)
DE Bac 2 chemokine beta10 or monocyte chemotactic protein 4 variant.
KW Human; chemokine beta10; Ck beta10; treatment; antagonist;
KW solid tumour; infection; autoimmune disease; asthma; antibody;
KW fibrotic disease; psoriasis; neurodegenerative disease;
KW wound healing; haematopoiesis regulation; gene therapy;
KW chromosome identification; monocyte chemotactic protein 4;
KW leukaemia; MCP-4; Bac 2 variant.
OS Homo sapiens.
PN WO9731098-Al.
PD 28-AUG-1997.
PF 23-FEB-1996; U02598.
PR 23-FEB-1996; WO-U02598.
PA (HUMA-) HUMAN GENOME SCI INC.
PI Adams M, Alderson R, Applebaum E, Li H, Li Y, Lima SH,
PI Parmelee D, White J;
DR WPI; 97-435153/40.
PT Polypeptide encoding chemokine beta 4 and monocyte chemotactic
PT protein 4 - useful to treat tumours, autoimmune disease, infection,
PT asthma and fibrosis
PS Example 11; Fig 5; 83pp; English.
CC The present sequence is human chemokine beta10 (Ck beta10) or
CC monocyte chemotactic protein 4 (MCP-4) Bac 2 variant, which can be
CC used to treat patients deficient in Ck beta10, while a Ck beta10
CC antagonist can be used to reduce excessive levels of Ck beta10. Ck

CC betal0 can be used to treat leukaemia, solid tumours, chronic or
 CC opportunistic infections, autoimmune diseases, asthma, fibrotic
 CC diseases, psoriasis and neurodegenerative diseases. It also
 CC promotes wound healing, regulates haematopoiesis and generates
 CC antibodies. Labelled Ck betal0 can be used to identify its cognate
 CC receptor, while cells expressing the receptor can be used to screen
 CC compounds for (ant)agonist activity. The antagonist can be used to
 CC treat rheumatoid arthritis, autoimmune, chronic inflammatory or
 CC infectious diseases, allergies, prostaglandin dependent fever and
 CC bone marrow failure, silicosis, sarcoidosis, hyper-eosinophilic
 CC syndrome, lung inflammation and atherosclerosis. Ck betal0 cDNA can
 CC be used to isolate genes encoding similar peptides, in gene therapy
 CC and for chromosome identification.
 CC Sequence 77 AA;

Query Match 100.0%; Score 96; DB 26; Length 77;

Best Local Similarity 100.0%; Pred. No. 1.33e-02;

Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 51 eicadpkekvwq 62

|||||

QY 1 EICADPKERWVQ 12

RESULT 5

ID W22674 standard; Protein; 79 AA.

AC W22674;

DE 19-MAR-1998 (first entry)

DT Droll1/2 chemokine betal0 or monocyte chemotactic protein 4 variant.

DE Human; chemokine betal0; Ck betal0; treatment; antagonist;

KW solid tumour; infection; autoimmune disease; asthma; antibody;

KW fibrotic disease; psoriasis; neurodegenerative disease;

KW wound healing; haematopoiesis regulation; gene therapy;

KW chromosome identification; monocyte chemotactic protein 4;

KW Leukaemia; MCP-4; Droll1/2 variant.

OS Homo sapiens.

PN WO9731098-A1.

PD 28-AUG-1997.

PF 23-FEB-1996; U02598.

PR 23-FEB-1996; WO-U02598.

PA (HUMA-) HUMAN GENOME SCI INC.

PI Adams M, Alderson R, Applebaum E, Li H, Li Y, Lima SH,

PI Parmelee D, White J;

DR WPI; 97-435153/40.

PT Polypeptide encoding chemokine beta 4 and monocyte chemotactic

PT protein 4 - useful to treat tumours, autoimmune disease, infection,

PT asthma and fibrosis

PS Example 11; Fig 5; 83pp; English.

CC The present sequence is human chemokine betal0 (Ck betal0) or

CC monocyte chemotactic protein 4 (MCP-4) Droll1/2 variant, which can

CC be used to treat patients deficient in Ck betal0, while a Ck betal0

CC antagonist can be used to reduce excessive levels of Ck betal0. Ck

CC betal0 can be used to treat leukaemia, solid tumours, chronic or

CC opportunistic infections, autoimmune diseases, asthma, fibrotic

CC diseases, psoriasis and neurodegenerative diseases. It also

CC promotes wound healing, regulates haematopoiesis and generates

CC antibodies. Labelled Ck betal0 can be used to identify its cognate

CC receptor, while cells expressing the receptor can be used to screen

CC compounds for (ant)agonist activity. The antagonist can be used to

CC treat rheumatoid arthritis, autoimmune, chronic inflammatory or

CC infectious diseases, allergies, prostaglandin dependent fever and

CC bone marrow failure, silicosis, sarcoidosis, hyper-eosinophilic

CC syndrome, lung inflammation and atherosclerosis. Ck betal0 cDNA can

CC be used to isolate genes encoding similar peptides, in gene therapy

CC and for chromosome identification.
 CC Sequence 79 AA;

Query Match

Best Local Similarity 100.0%; Score 96; DB 26; Length 79;

Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 53 eicadpkekvwq 64

|||||

QY 1 EICADPKERWVQ 12

QY 1 EICADPKERWVQ 12

RESULT 6

ID W17665 standard; peptide; 82 AA.

AC W17665;

DE 16-DEC-1997 (first entry)

DE Stem cell mobilising chemokine CKbeta-10.

KW Haematopoietic cell; parasitic infection; colony stimulating factor;

KW Haematopoietic cell; parasitic infection; bacterial infection; transplant;

KW wound healing; bone marrow; immunosuppression; regeneration;

KW neoplastic disease; viral disease; gene therapy; cytotoxic drug.

OS Synthetic.

PN WO9715594-A1.

PD 01-MAY-1997.

PF 23-OCT-1996; U16959.

PR 24-OCT-1995; US-006051.

PA (SMIK) SMITHKLINE BEECHAM CORP.

PI Kreider BL, Li H, Pelus L, White JR;

DR WPI; 97-258956/23.

PT Ten new chemokine(s) able to mobilise stem cells - used where

PT increased levels of haematopoietic cells are required, e.g. to

PT increase resistance to infection

PS Claim 7; Page 11-12; 24pp; English.

CC The present sequence represents a chemokine, CKbeta-10, which is capable

CC of mobilising stem cells. The chemokine can be used therapeutically to

CC improve stem cell mobilisation, optionally together with a colony

CC stimulating factor or other haematopoietic agent. It can be used

CC wherever an increased level of haematopoietic cells is needed, e.g. to

CC increase the immune response to chronic infection (particularly

CC bacterial or parasitic), to promote wound healing, in (transplant)

CC patients with reduced bone marrow function as a result of

CC immunosuppressive treatment or disease, and to provide more rapid

CC regeneration of bone marrow after treatment for neoplastic or viral

CC diseases. The induced stem cells may be harvested for subsequent return

CC to the patient, optionally after they have been genetically manipulated

CC to deliver a selected gene product (gene therapy). The cells may be

CC co-administered with a cytotoxic drug.
 CC Sequence 82 AA;

Query Match

Best Local Similarity 100.0%; Score 96; DB 24; Length 82;

Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 56 eicadpkekvwq 67

|||||

QY 1 EICADPKERWVQ 12

RESULT 7

ID W22671 standard; Protein; 82 AA.

AC W22671;

DT 19-MAR-1998 (first entry)

DE Bac 1 chemokine betal0 or monocyte chemotactic protein 4 variant.

KW Human; chemokine betal0; Ck betal0; treatment; antagonist;

KW solid tumour; infection; autoimmune disease; asthma; antibody;

KW fibrotic disease; psoriasis; neurodegenerative disease;

KW wound healing; haematopoiesis regulation; gene therapy;

KW chromosome identification; monocyte chemotactic protein 4;

KW Leukaemia; MCP-4; Bac 1 variant.

OS Homo sapiens.

PN WO9731098-A1.

PD 28-AUG-1997.

PF 23-FEB-1996; U02598.

PR 23-FEB-1996; WO-U02598.

PA (HUMA-) HUMAN GENOME SCI INC.

PI Adams M, Alderson R, Applebaum E, Li H, Li Y, Lima SH,

PI Parmelee D, White J;

DR WPI; 97-435153/40.

PT Polypeptide encoding chemokine beta 4 and monocyte chemotactic

PT protein 4 - useful to treat tumours, autoimmune disease, infection,

PT asthma and fibrosis

PS Example 11; Fig 5; 83pp; English.

CC The present sequence is human chemokine beta10 (Ck beta10) or
 CC monocyte chemoattractant protein 4 (MCP-4) Bac 1 variant, which can be
 CC used to treat patients deficient in Ck beta10, while a Ck beta10
 CC antagonist can be used to reduce excessive levels of Ck beta10. Ck
 CC beta10 can be used to treat leukaemia, solid tumours, chronic or
 CC opportunistic infections, autoimmune diseases, asthma, fibrotic
 CC diseases, psoriasis and neurodegenerative diseases. It also
 CC promotes wound healing, regulates haematopoiesis and generates
 CC antibodies. Labelled Ck beta10 can be used to identify its cognate
 CC receptor, while cells expressing the receptor can be used to screen
 CC compounds for (antagonist) activity. The antagonist can be used to
 CC treat rheumatoid arthritis, autoimmune, chronic inflammatory or
 CC infectious diseases, allergies, prostaglandin dependent fever and
 CC bone marrow failure, silicosis, sarcoidosis, hyper-eosinophilic
 CC syndrome, lung inflammation and atherosclerosis. Ck beta10 cDNA can
 CC be used to isolate genes encoding similar peptides, in gene therapy
 CC and for chromosome identification.

Sequence 82 AA;

Query Match 100.0%; Score 96; DB 26; Length 82;
 Best Local Similarity 100.0%; Pred. No. 1.33e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 56 eicadpkckwq 67

QY 1 EICADPKKWKQ 12

RESULT

ID W56087 standard; Protein; 98 AA.
 AC W56087;
 DT 17-AUG-1998 (first entry)
 DE Human monocyte chemoattractant protein 4.
 KW Human; monocyte chemoattractant protein; MCP-4; MCP-5; chemokine;
 KW immune response; cancer; AIDS; malaria; parasitic infection.
 OS Homo sapiens.
 PN W09814573-A1.
 PD 09-APR-1998.
 PF 30-SEP-1997; U17900.
 PR 30-SEP-1996; US-027128.
 PA (GEO) GEN HOSPITAL CORP.
 PI Garcia-Zepeda E, Luster AD, Sarafi M;
 DR WPI: 98-240080/21.
 DR N-PSDB; V28591.
 PT Monocyte chemoattractant proteins, MCP-4 and MCP-3 - used to develop
 PT products for treating e.g. cancers, infections, asthma, cystic
 PT fibrosis, rhinitis, atherosclerosis or inflammatory bowel disease
 PS Claim 8; Page 53; 106pp; English.
 CC The present sequence represents human monocyte chemoattractant protein 4
 CC (MCP-4). The MCP-4 and MCP-5 have activity in stimulating chemotactic
 CC activity. The proteins can be used for treating cancers, e.g. a
 CC lymphoma (e.g. Hodgkin's lymphoma), a plasmacytoma, a melanoma, a
 CC sarcoma, a tumour within the lung or gastrointestinal tract, or
 CC infectious disease such as AIDS or malaria. Antagonists to the proteins
 CC can be used for treating e.g. asthma, chronic obstructive pulmonary
 CC disease, cystic fibrosis, sinusitis, rhinitis, atherosclerosis,
 CC glomerulonephritis, multiple sclerosis, inflammatory bowel disease,
 CC arthritis or adult respiratory distress syndrome. Infections such as
 CC parasitic infections may also be treated with a molecule that inhibits
 CC MCP-4 or MCP-5 expression.

Sequence 98 AA;

Query Match 100.0%; Score 96; DB 31; Length 98;
 Best Local Similarity 100.0%; Pred. No. 1.33e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 72 eicadpkckwq 83

QY 1 EICADPKKWKQ 12

RESULT

ID W22670 standard; Protein; 98 AA.

AC W22670;
 DT 19-MAR-1998 (first entry)
 DE Human chemokine beta10 or monocyte chemoattractant protein 4.
 KW Human; chemokine beta10; Ck beta10; treatment; antagonist;
 KW solid tumour; infection; autoimmune disease; asthma; antibody;
 KW fibrotic disease; psoriasis; neurodegenerative disease;
 KW wound healing; haematopoiesis regulation; gene therapy;
 KW chromosome identification; monocyte chemoattractant protein 4;
 KW leukaemia; MCP-4.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT Peptide 1..23
 FT /label= sig_peptide
 FT 24..98
 FT /label= mat_peptide
 PN W09731098-A1.
 PD 28-AUG-1997.
 PF 23-FEB-1996; U02598.
 PR 23-FEB-1996; WO-U02598.
 PA (HUMA-) HUMAN GENOME SCI INC.
 PI Adams M, Alderson R, Applebaum E, Li H, Li Y, Lima SH,
 PI Parmelee D, White J;
 DR WPI: 97-435153/40.
 DR N-PSDB; T85029.
 PT Polypeptide encoding chemokine beta 4 and monocyte chemoattractant
 PT protein 4 - useful to treat tumours, autoimmune disease, infection,
 PT asthma and fibrosis
 PS Claim 1; Fig 2; 83pp; English.
 CC The present sequence is human chemokine beta10 (Ck beta10) or
 CC monocyte chemoattractant protein 4 (MCP-4), which can be used to treat
 CC patients deficient in Ck beta10, while a Ck beta10 antagonist can be
 CC used to reduce excessive levels of Ck beta10. Ck beta10 can be
 CC used to treat leukaemia, solid tumours, chronic or opportunistic
 CC infections, autoimmune diseases, asthma, fibrotic diseases,
 CC psoriasis and neurodegenerative diseases. It also promotes wound
 CC healing, regulates haematopoiesis and generates antibodies.
 CC Labelled Ck beta10 can be used to identify its cognate receptor,
 CC while cells expressing the receptor can be used to screen compounds
 CC for (antagonist) activity. The antagonist can be used to treat
 CC rheumatoid arthritis, autoimmune, chronic inflammatory or
 CC infectious diseases, allergies, prostaglandin dependent fever and
 CC bone marrow failure, silicosis, sarcoidosis, hyper-eosinophilic
 CC syndrome, lung inflammation and atherosclerosis. Ck beta10 cDNA can
 CC be used to isolate genes encoding similar peptides, in gene therapy
 CC and for chromosome identification.

Sequence 98 AA;

Query Match 100.0%; Score 96; DB 26; Length 98;
 Best Local Similarity 100.0%; Pred. No. 1.33e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 72 eicadpkckwq 83

QY 1 EICADPKKWKQ 12

RESULT

ID W30191 standard; Protein; 98 AA.
 AC W30191;
 DT 21-MAY-1998 (first entry)
 DE Monocyte chemoattractant protein 5.
 KW Monocyte chemoattractant protein 5;
 KW chemokine; inhibitor; antiinflammatory; atherosclerosis;
 KW Crohn's disease; arthritis; angiogenesis; tumour; metastasis;
 KW therapy; diagnosis; medical imaging.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT Peptide 1..23
 FT /label= Sig_peptide
 FT 24..98
 FT Protein /label= Mat_peptide
 FT /note= "(Claim 4)"
 PN W09735982-A2.

PD 02-OCT-1997.
 PF 26-MAR-1997; U04898.
 PR 27-MAR-1996; US-622851.
 PA (ICOS-) ICOS CORP.
 PI Godiska R, Gray PW;
 DR WPI: 97-489645/45.
 DR N-PSDB; T90880.
 PT Polynucleotide encoding monocyte chemotactic protein-5 - useful in
 PT treatment of e.g. inflammation, arteriosclerosis, angiogenesis and
 PT tumours
 PS Claim 1; Page 36-37; 47pp; English.
 CC This polypeptide comprises human macrophage-derived
 CC monocyte chemotactic protein-5 (MCP-5), a novel C-C chemokine.
 CC Its amino acid sequence was deduced from a cDNA clone (see
 CC T90880 and T90883) isolated from a human macrophage cDNA
 CC library. A claimed method for producing MCP-5 comprises
 CC culturing a host cell that is stably transformed or transfected
 CC with MCP-5 polynucleotide. Also claimed is a hybridoma that
 CC produces a monoclonal antibody (MAB) that is specifically
 CC reactive with the mature MCP-5. MCP-5 (or its analogues and
 CC fragments) is used to enhance the immune response in cases of
 CC wounds or infections, while its inhibitors (e.g. the MAB) are
 CC useful as anti-inflammatory in cases of e.g. arthritis and
 CC Crohn's disease, also for treatment of arteriosclerosis.
 CC angiogenesis and tumour growth (or metastasis). The MCP-5
 CC inhibitors can possibly also be used to reduce the damaging effects
 CC of chemo- and radio-therapy on myeloid progenitor cells, and to
 CC inhibit replication of HIV. MCP-5 can also be used to identify
 CC its cognate receptor, while MCP-5 peptides (or the analogues or
 CC receptors) are used to modulate MCP-5 activity and to identify
 CC MCP-5 agonists and antagonists.
 SQ Sequence 98 AA;

Query Match 100.0%; Score 96; DB 28; Length 98;
 Best Local Similarity 100.0%; Pred. No. 1.33e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 72 eicadpkekvwq 83
 QY 1 EICADPKEKWWQ 12
 |||||

RESULT 11
 ID R3087 standard; Protein; 98 AA.
 AC R3087;
 DT 27-AUG-1996 (first entry)
 DE Human chemokine beta-10.
 KW Chemokine beta-10; chemokine beta-4; Ck beta-10; Ck beta-4;
 KW cytokine; leukaemia; tumour; cancer; autoimmune disease; psoriasis;
 KW asthma; allergy; wound healing; diagnosis; therapy.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT peptide 1..23
 FT /label= Sig_peptide
 FT protein 25..98
 FT /label= Mat_protein
 PN WO9605856-A1.
 PD 29-FEB-1996.
 PF 23-AUG-1994; U09484.
 PR 23-AUG-1994; WO-U09484.
 PR 08-SEP-1994; ZA-006936.
 PA (HUMA-) HUMAN GENOME SCI INC.
 PI Adams MD, Li H;
 DR WPI: 96-151145/15.
 DR N-PSDB; T17050.
 PT New chemokine Ck(beta)-4 and -10 genes and polypeptide(s) - useful
 PT to treat, e.g. leukaemia, solid tumours and auto-immune diseases
 PS Claim 19; Fig 2; 53pp; English.
 CC A novel human chemokine, Ck beta-10 (R93087), was identified as
 CC the product of a cDNA clone (T17050) isolated from a 9-wk early
 CC human tissue cDNA library. The protein is structurally related to
 CC the chemokine family. Recombinant Ck beta-10 can be obtd. by
 CC incorporating the cDNA into a vector and expression of the protein

CC in e.g. E. coli, COS or Sf9 cells. Ck beta-10 can be used to treat
 CC solid tumours, chronic infections, psoriasis, asthma and allergy,
 CC to regulate haematopoiesis, promote wound healing, and to inhibit
 CC angiogenesis. It can also be used to inhibit bone marrow stem cell
 CC colony formn. during chemotherapy.
 SQ Sequence 98 AA;

Query Match 100.0%; Score 96; DB 17; Length 98;
 Best Local Similarity 100.0%; Pred. No. 1.33e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 72 eicadpkekvwq 83
 QY 1 EICADPKEKWWQ 12
 |||||

RESULT 12
 ID W13598 standard; peptide; 66 AA.
 AC W13598;
 DT 07-NOV-1997 (first entry)
 DE Monocyte chemoattractant protein analogue MCP-1 (10-76).
 KW Truncated monocyte chemoattractant protein-1; inhibitor;
 KW receptor binding; anti-inflammatory; basophil; lymphocyte; allergy;
 KW chronic inflammatory disease; arthritis; arteriosclerosis;
 KW lung disease.
 OS Homo sapiens.
 PN CA2152141-A.
 PD 20-DEC-1996.
 PF 19-JUN-1995; 152141.
 PR 19-JUN-1995; CA-152141.
 PA (LEWIS) LEWIS I.
 PI Gong J, Lewis I;
 DR WPI: 97-165844/16.
 PT N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) -
 PT lacks MCP-1 activity and inhibits receptor binding, useful as
 PT anti-inflammatory agent
 PS Disclosure; Page 5; 27pp; English.
 CC The present sequence represents an analogue, MCP-1 (10-76), of monocyte
 CC chemoattractant protein-1 (MCP-1). The analogue, which lacks the
 CC N-terminal amino acids 1-9 of MCP-1, acts as an antagonist of MCP-1
 CC as it lacks MCP-1 biological activity and inhibits binding to a MCP-1
 CC receptor. The analogue is useful as an anti-inflammatory agent to block
 CC the effects of MCP-1 which is an inflammatory mediator causing migration
 CC of monocytes and other cells e.g. basophils and lymphocytes into
 CC inflammatory sites. MCP-1 has been implicated in allergic and chronic
 CC inflammatory diseases e.g. arthritis, arteriosclerosis and several lung
 CC diseases. The analogue competes more effectively with MCP-1 for binding
 CC MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably
 CC providing 50% inhibition of binding at a 25:1 ratio or less, compared
 CC with 75:1 for prior art mutant 7ND.
 SQ Sequence 66 AA;

Query Match 96.9%; Score 93; DB 24; Length 66;
 Best Local Similarity 91.7%; Pred. No. 2.71e-02;
 Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 40 eicadpkekvwq 51
 QY 1 EICADPKEKWWQ 12
 |||||

RESULT 13
 ID W13599 standard; peptide; 67 AA.
 AC W13599;
 DT 07-NOV-1997 (first entry)
 DE Monocyte chemoattractant protein analogue MCP-1 (11-76).
 KW Truncated monocyte chemoattractant protein-1; inhibitor;
 KW receptor binding; anti-inflammatory; basophil; lymphocyte; allergy;
 KW chronic inflammatory disease; arthritis; arteriosclerosis;
 KW lung disease.
 OS Homo sapiens.
 PN CA2152141-A.
 PD 20-DEC-1996.

PF 19-JUN-1995; 152141.
 PR 19-JUN-1995; CA-152141.
 PA (LEWIS) LEWIS I.
 PI Gong J, Lewis I;
 PT WPI; 97-165844/16.
 PT N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) -
 PT lacks MCP-1 activity and inhibits receptor binding, useful as
 PT anti-inflammatory agent
 PS Disclosure; Page 5; 27pp; English.
 CC The present sequence represents an analogue, MCP-1 (11-76), of monocyte
 CC chemoattractant protein-1 (MCP-1). The analogue, which lacks the
 CC N-terminal amino acids 1-10 of MCP-1, acts as an antagonist of MCP-1
 CC as it lacks MCP-1 biological activity and inhibits binding to a MCP-1
 CC receptor. The analogue is useful as an anti-inflammatory agent to block
 CC the effects of MCP-1 which is an inflammatory mediator causing migration
 CC of monocytes and other cells e.g. basophils and lymphocytes into
 CC inflammation sites. MCP-1 has been implicated in allergic and chronic
 CC inflammatory diseases e.g. arthritis, arteriosclerosis and several lung
 CC diseases. The analogue competes more effectively with MCP-1 for binding
 CC MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably
 CC providing 50% inhibition of binding at a 25:1 ratio or less, compared
 CC with 75:1 for prior art mutant 7ND.
 SQ Sequence 67 AA;

Query Match 96.9%; Score 93; DB 24; Length 67;
 Best Local Similarity 91.7%; Pred. No. 2.71e-02;
 Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 41 eicadpkqkwvq 52
 QY 1 EICADPKKWKVQ 12
 |||||:||||

RESULT 14
 ID W13597;
 AC W13597;
 DT 07-NOV-1997 (first entry)
 DE Monocyte chemoattractant protein analogue MCP-1 (9-76).
 KW Truncated monocyte chemoattractant protein-1; inhibitor;
 KW receptor binding; anti inflammatory; basophil; lymphocyte; allergy;
 KW chronic inflammatory disease; arthritis; arteriosclerosis;
 KW lung disease.
 OS Homo sapiens.
 PN CA2152141-A.
 PD 20-DEC-1996.
 PF 19-JUN-1995; 152141.
 PR 19-JUN-1995; CA-152141.
 PA (LEWIS) LEWIS I.
 PI Gong J, Lewis I;
 PT WPI; 97-165844/16.
 PT N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) -
 PT lacks MCP-1 activity and inhibits receptor binding, useful as
 PT anti-inflammatory agent
 PS Claim 7; Page 5; 27pp; English.
 CC The present sequence represents an analogue, MCP-1 (9-76), of monocyte
 CC chemoattractant protein-1 (MCP-1). The analogue, which lacks the
 CC N-terminal amino acids 1-8 of MCP-1, acts as an antagonist of MCP-1
 CC as it lacks MCP-1 biological activity and inhibits binding to a MCP-1
 CC receptor. The analogue is useful as an anti-inflammatory agent to block
 CC the effects of MCP-1 which is an inflammatory mediator causing migration
 CC of monocytes and other cells e.g. basophils and lymphocytes into
 CC inflammation sites. MCP-1 has been implicated in allergic and chronic
 CC inflammatory diseases e.g. arthritis, arteriosclerosis and several lung
 CC diseases. The analogue competes more effectively with MCP-1 for binding
 CC MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably
 CC providing 50% inhibition of binding at a 25:1 ratio or less, compared
 CC with 75:1 for prior art mutant 7ND.
 SQ Sequence 68 AA;

Query Match 96.9%; Score 93; DB 24; Length 68;
 Best Local Similarity 91.7%; Pred. No. 2.71e-02;
 Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 42 eicadpkqkwvq 53
 QY 1 EICADPKKWKVQ 12
 |||||:||||

RESULT 15
 ID R87678 standard; protein; 69 AA.
 AC R87678;
 DT 21-FEB-1996 (first entry)
 DE des(2-8) MCP-1.
 KW monocyte chemoattractant protein; MCP-1; mutant; restenosis;
 OS Homo sapiens.
 FH Key
 FT modified_site 2..3
 FT Location/Qualifiers
 FT 2..3
 FT /note= "amino acids 2-8 of the native protein have
 FT been deleted between these residues"
 FT disulfide_bond 4..29
 FT disulfide_bond 5..45
 PN W09513295-A1.
 PD 18-MAY-1995.
 PF 07-NOV-1994; U12874.
 PR 12-NOV-1993; US-152301.
 PA (DAND) DANA FARBER CANCER INST INC.
 PI Rollins B, Zhang YJ;
 DR WPI; 95-215051/28.
 PT Human monocyte chemoattractant protein-1 (MCP-1) derivs. - are
 PT capable of inhibiting the monocyte chemoattractant activity of
 PT endogenous MCP-1 and can be used to treat restenosis
 PS Claim 4; Page 11; 22pp; English.
 CC Monocyte chemoattractant protein-1 (MCP-1) derivatives are mutated such
 CC that they inhibit the monocyte chemoattractant activity of endogenous
 CC MCP-1, provided that the derivative has not been modified by the
 CC substitution of 28-Tyr by Leu and/or 30-Arg by Val. Preferred mutations
 CC are: (1) substitution of 28 Tyr by aspartate; (2) substitution of 24 Arg
 CC by Phe; (3) substitution of 3-Asp by Ala; and/or (4) deletion of amino
 CC acids 2-8. The present sequence is a specifically claimed human MCP-1
 CC derivative based on the parent protein disclosed in Rollins, Molecular
 CC and Cellular Biology, Vol. 9, No. 11, pp. 4687-4695, Nov. 1989.
 CC The peptides can be used to prevent restenosis, e.g. in patients
 CC undergoing coronary artery angioplasty.
 SQ Sequence 69 AA;

Query Match 96.9%; Score 93; DB 14; Length 69;
 Best Local Similarity 91.7%; Pred. No. 2.71e-02;
 Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 43 eicadpkqkwvq 54
 QY 1 EICADPKKWKVQ 12
 |||||:||||

Search completed: Fri Feb 4 17:38:31 2000
 Job time : 20 secs.

 M P S R C H (TM)

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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 17:45:15 2000; MasPar time 2.53 Seconds
 133.995 Million cell updates/sec
 Tabular output not generated.

Title: >US-09-150-813-66
 Description: (1-12) from US09150813.ppt
 Perfect Score: 95
 Sequence: 1 EICADPTQKWQ 12

Scoring table: PAM 150
 Gap 15

Searched: 77977 seqs, 28268293 residues

Post-processing: Minimum Match 0%
 Listing first 45 summaries

Database: swiss-prot37
 1:swissprot

Statistics: Mean 25.241; Variance 32.618; scale 0.774

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Description	ID	Pred. No.
1	95	100.0	MONOCYTE CHEMOTACTIC P	1 MCP3_HUMAN	1.56e-09
2	93	97.9	MONOCYTE CHEMOTACTIC P	1 MCP1_CAVPO	4.97e-09
3	90	94.7	MONOCYTE CHEMOTACTIC P	1 MCP1_HUMAN	2.79e-08
4	90	94.7	MONOCYTE CHEMOTACTIC P	1 MCP1_CANFA	2.79e-08
5	89	93.7	MONOCYTE CHEMOTACTIC P	1 MCP1_PIG	4.94e-08
6	87	91.6	MONOCYTE CHEMOTACTIC P	1 MCP2_BOVIN	1.54e-07
7	86	90.5	MONOCYTE CHEMOTACTIC P	1 MCP2_HUMAN	2.70e-07
8	86	90.5	MONOCYTE CHEMOTACTIC P	1 MCP2_PIG	4.73e-07
9	85	89.5	MONOCYTE CHEMOTACTIC P	1 MCP2_BOVIN	8.27e-07
10	84	88.4	MONOCYTE CHEMOTACTIC P	1 MCP1_RABIT	1.44e-06
11	83	87.4	EOTAXIN PRECURSOR (EOS	1 EOTAX_RAT	1.44e-06
12	83	87.4	EOTAXIN PRECURSOR (EOS	1 EOTAX_MOUSE	2.51e-06
13	82	86.3	EOTAXIN PRECURSOR (EOS	1 EOTAX_HUMAN	7.54e-06
14	80	84.2	MACROPHAGE INFLAMMATOR	1 MIP4_HUMAN	1.30e-05
15	79	83.2	MACROPHAGE INFLAMMATOR	1 MCP5_MOUSE	3.85e-05
16	77	81.1	MACROPHAGE INFLAMMATOR	1 EOTAX_CAVPO	3.85e-05
17	77	81.1	INTERLEUKIN-8 PRECURSO	1 IL8_SHEEP	3.85e-05
18	77	81.1	INTERLEUKIN-8 PRECURSO	1 IL8_CANFA	3.85e-05
19	77	81.1	INTERLEUKIN-8 PRECURSO	1 IL8_PIG	6.58e-05
20	76	80.0	MACROPHAGE INFLAMMATOR	1 MIP4_RAT	1.12e-04
21	75	78.9	MONOCYTE CHEMOTACTIC P	1 MCP2_BOVIN	1.12e-04
22	75	78.9	MACROPHAGE INFLAMMATOR	1 MIP4_HUMAN	1.12e-04
23	75	78.9	MACROPHAGE INFLAMMATOR	1 MIP4_HUMAN	1.12e-04

ALIGNMENTS

RESULT	1	MCP3_HUMAN	STANDARD;	PRT;	99 AA.
ID	AC	P80098;			
DT	01-DEC-1992	(REL. 24, CREATED)			
DT	01-NOV-1995	(REL. 32, LAST SEQUENCE UPDATE)			
DT	15-JUL-1998	(REL. 36, LAST ANNOTATION UPDATE)			
DE	MONOCYTE CHEMOTACTIC PROTEIN 3 PRECURSOR (MCP-3) (MONOCYTE				
DE	CHEMOATTRACTANT PROTEIN 3) (NC28).				
GN	SCYA7 OR MCP3				
OS	HOMO SAPIENS (HUMAN).				
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;				
OC	PRIMATES; CATARRHINI; HOMINIDAE; HOMO.				
RN	[1]	SEQUENCE FROM N.A., AND SEQUENCE OF 31-67 AND 71-99.			
RP	MDLINE:	93213290.			
RX	OPDENAKKER G., FROYEN G., FITEEN P., PROOST P., VAN DAMME J.;				
RA	"Human monocyte chemotactic protein-3 (MCP-3): molecular cloning of				
RT	the cDNA and comparison with other chemokines."				
RL	BIOCHEM. BIOPHYS. RES. COMMUN. 191:535-542(1993).				
RN	[2]	SEQUENCE FROM N.A.			
RP	MDLINE:	94375065.			
RX	OPDENAKKER G., FITEEN P., NYS G., FROYEN G., VAN ROY N., SPELEMAN F.,				
RA	"The human MCP-3 gene (SCYA7): cloning, sequence analysis, and				
RT	assignment to the C-C chemokine gene cluster on chromosome				
RL	17q11.2-q12."				
RN	GENOMICS 21:403-408(1994).				
RP	SEQUENCE FROM N.A.				
RX	MDLINE:	93305913.			
RA	MINTY A., CHALON P., GUILLEMOT J.C., KAGHAD M., LIAUZUN P.,				
RA	MAGAZIN M., MILOUX B., MINTY C., RAMOND P., VITA N., LUPKER J.,				
RT	"Molecular cloning of the MCP-3 chemokine gene and regulation of its				
RL	expression."				
RN	EUR. CYTOKINE NETW. 4:99-110(1993).				
RP	[4]	SEQUENCE OF 30-99.			
RX	TISSUE-OSTEOSARCOMA;				
RA	MDLINE:	92308855.			
RA	VAN DAMME J., PROOST P., LENAERTS J.-P., OPDENAKKER G.;				
RT	"Structural and functional identification of two human, tumor-derived				
RL	monocyte chemotactic proteins (MCP-2 and MCP-3) belonging to the				
RL	chemokine family."				
RN	J. EXP. MED. 176:59-65(1992).				
RN	[5]				

24	75	78.9	93	1	MIP4_HUMAN	TONSILLAR LYMPHOCYTE L	1.12e-04
25	75	78.9	99	1	MCP2_HUMAN	MONOCYTE CHEMOTACTIC P	1.12e-04
26	75	78.9	148	1	MCP1_RAT	MONOCYTE CHEMOTACTIC P	1.12e-04
27	74	77.9	101	1	IL8_BOVIN	INTERLEUKIN-8 PRECURSO	1.91e-04
28	74	77.9	101	1	IL8_RABIT	INTERLEUKIN-8 PRECURSO	1.91e-04
29	73	76.8	91	1	SISD_MOUSE	T-CELL SPECIFIC RANTES	3.24e-04
30	73	76.8	92	1	SISD_RAT	T-CELL SPECIFIC RANTES	3.24e-04
31	73	76.8	93	1	CCCL_HUMAN	CHEMOKINE CC-1 PRECURS	3.24e-04
32	73	76.8	97	1	MCP3_MOUSE	MONOCYTE CHEMOTACTIC P	3.24e-04
33	73	76.8	109	1	CCG3_HUMAN	CHEMOKINE CC-3 PRECURS	3.24e-04
34	73	76.8	148	1	MCP1_MOUSE	MONOCYTE CHEMOTACTIC P	3.24e-04
35	72	75.8	92	1	MIP4_RABIT	MACROPHAGE INFLAMMATOR	5.47e-04
36	69	72.6	92	1	MIP4_MOUSE	MACROPHAGE INFLAMMATOR	5.47e-04
37	68	71.6	89	1	SDF1_MOUSE	STROMAL CELL-DERIVED F	4.31e-03
38	68	71.6	90	1	MIPB_CHICK	MACROPHAGE INFLAMMATOR	4.31e-03
39	68	71.6	92	1	MIPB_RAT	MACROPHAGE INFLAMMATOR	4.31e-03
40	68	71.6	93	1	SDF1_HUMAN	STROMAL CELL-DERIVED F	4.31e-03
41	68	71.6	93	1	SDF1_FELCA	STROMAL CELL-DERIVED F	4.31e-03
42	68	71.6	99	1	IL8_HUMAN	INTERLEUKIN-8 PRECURSO	4.31e-03
43	68	71.6	101	1	IL8_CAVPO	INTERLEUKIN-8 PRECURSO	4.31e-03
44	68	71.6	103	1	EMFL_CHICK	EMBRYO FIBROBLAST PROT	4.31e-03
45	67	70.5	114	1	LTN_RAT	LYMPHOTACTIN PRECURSOR	7.15e-03

RP STRUCTURE BY NMR, AND SUBUNIT.
RX MEDLINE: 97053697
RA KIM K.-S., RAJARATHNAM K., CLARK-LEWIS I., SYKES B.D.:
RT "Structural characterization of a monomeric chemokine: monocyte
RL chemoattractant protein-3.";
RN FEBS LETT. 395:277-282(1996).
[6]
RP STRUCTURE BY NMR.
RX MEDLINE: 97263733.
RA MEUNIER S., BERNASSAU J.-M., GUILLEMOT J.-C., FERRARA P., DARBON H.:
RT "determination of the three-dimensional structure of CC chemokine
RT monocyte chemoattractant protein 3 by 1H two-dimensional NMR
RL spectroscopy.";
RN BIOCHEMISTRY 36:4412-4422(1997).
CC -1- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES AND
CC EOSINOPHILS, BUT NOT NEUTROPHILS. AUGMENTS MONOCYTE ANTI-TUMOR
CC ACTIVITY. ALSO INDUCES THE RELEASE OF GELATINASE B. THIS PROTEIN
CC CAN BIND HEPARIN.
CC -1- SUBUNIT: MONOMER.
CC -1- PTM: O-GLYCOSYLATED.
CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).

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DR EMBL: X72308; G313708; ALT_INIT.
DR EMBL: X72309; -: NOT_ANNOTATED_CDS.
DR EMBL: X71087; G288399; -
DR EMBL: X71087; G288398; ALT_INIT.
DR EMBL: X71087; G288397; ALT_INIT.
DR PIR: JCI478; JCI478.
DR PIR: S32222; S32222.
DR PIR: A54678; A54678.
DR PDB: INCV; 15-OCT-97.
DR MIM: 158106; -.
DR PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM: PF00048; 118; 1.
DR CYTOKINE: CHEMOTAXIS; HEPARIN-BINDING; GLYCOPROTEIN; SIGNAL;
KW INFLAMMATORY RESPONSE; 3D-STRUCTURE.
FT SIGNAL 1 23
FT CHAIN 24 99 MONOCYTE CHEMOTACTIC PROTEIN 3.
FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID.
FT DISULFID 34 59 BY SIMILARITY.
FT DISULFID 35 75 BY SIMILARITY.
FT CARBOHYD 29 29 POTENTIAL.
FT CONFLICT 30 30 T -> K (IN REF. 4).
FT CONFLICT 68 70 MISSING (IN REF. 4).
SQ SEQUENCE 99 AA; 11200 MW; 7502E19C CRC32;

Query Match 100.0%; Score 95; DB 1; Length 99;
Best Local Similarity 100.0%; Pred. No. 1.56e-09;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 73 EICADPTQKWQ 84
| | | | | | | | | |
QY 1 EICADPTQKWQ 12

RESULT 2
ID MCP1_CAVPO STANDARD; PRT; 120 AA.
AC Q08782;
DT 01-NOV-1995 (REL. 32, CREATED)
DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1) (MONOCYTE
DE CHEMOATTRACTANT PROTEIN-1).
GN SCYA2 OR MCP1.

Db 73 EICADPTQKWQ 84
| | | | | | | | | |
QY 1 EICADPTQKWQ 12

RESULT 2
ID MCP1_CAVPO STANDARD; PRT; 120 AA.
AC Q08782;
DT 01-NOV-1995 (REL. 32, CREATED)
DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1) (MONOCYTE
DE CHEMOATTRACTANT PROTEIN-1).
GN SCYA2 OR MCP1.

OS CAVIA PORCELLUS (GUINEA PIG).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; HYSTRICOGNATHI; CAVIIDAE; CAVIA.
RN [1]
RP SEQUENCE FROM N.A.
RX STRAIN=2; TISSUE=SPLEEN;
RX MEDLINE: 93267104.
RA YOSHIMURA T.;
RT "cDNA cloning of guinea pig monocyte chemoattractant protein-1 and
RT expression of the recombinant protein.";
RL J. IMMUNOL. 150:5025-5032(1993).
CC -1- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
CC NEUTROPHILS.
CC -1- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).

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CC or send an email to license@isb-sib.ch).

DR EMBL: L04985; G349821; -
DR PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM: PF00048; 118; 1.
DR HSP: P80098; INCV.
KW CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE; GLYCOPROTEIN.
FT SIGNAL 1 23
FT CHAIN 24 120 MONOCYTE CHEMOTACTIC PROTEIN 1.
FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
FT SIMILARITY).
FT DISULFID 33 57 BY SIMILARITY.
FT DISULFID 34 73 BY SIMILARITY.
FT CARBOHYD 97 97 POTENTIAL.
SQ SEQUENCE 120 AA; 13741 MW; 22FAD257 CRC32;

Query Match 97.9%; Score 93; DB 1; Length 120;
Best Local Similarity 91.7%; Pred. No. 4.97e-09;
Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 71 EVCADPTQKWQ 82
| | | | | | | | | |
QY 1 EVCADPTQKWQ 12

RESULT 3
ID MCP1_HUMAN STANDARD; PRT; 99 AA.
AC P13500;
DT 01-JAN-1990 (REL. 13, CREATED)
DT 01-JAN-1990 (REL. 13, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1) (MONOCYTE CHEMOTACTIC
DE AND ACTIVATING FACTOR) (MCAF) (MONOCYTE SECRETORY PROTEIN JE)
DE (MONOCYTE CHEMOATTRACTANT PROTEIN 1) (HC11) (SMALL INDUCIBLE CYTOKINE
DE A2).
GN SCYA2 OR MCP1.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE: 89165862.
RA FURUTANI Y., NOMURA H., NOTAKE M., OYAMADA Y., FUKUI T., YAMADA M.,
RA LARSEN C.G., OPPENHEIM J.J., MATSUSHIMA K.:
RT "Cloning and sequencing of the cDNA for human monocyte chemotactic
RT and activating factor (MCAF)."
RL BIOCHEM. BIOPHYS. RES. COMMUN. 159:249-255(1989).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE: 90097880.

RA ROLLINS B.J., STIER P., ERNST T., WONG G.G.:
RT "The human homolog of the JE gene encodes a monocyte secretory
RL protein.";
RL MOL. CELL. BIOL. 9:4687-4695(1989).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE: 89153605.
RA YOSHIMURA T., YUHKI N., MOORE S.K., APPELLA E., LERMAN M.I.,
RA LEONARD E.J.:
RT "Human monocyte chemoattractant protein-1 (MCP-1). Full-length cDNA
RT cloning, expression in mitogen-stimulated blood mononuclear
RT leukocytes, and sequence similarity to mouse competence gene JE.";
RL FEBS LETT. 244:487-493(1989).
RN [4]
RP SEQUENCE FROM N.A.
RX MEDLINE: 90290466.
RA SHYU Y.J., LI Y.S., KOLATTUKUDY P.E.:
RT "Structure of human monocyte chemotactic protein gene and its
RT regulation by TPA.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 169:346-351(1990).
RN [5]
RP SEQUENCE FROM N.A.
RX MEDLINE: 91207938.
RA CHANG H.C., HSU F., FREEMAN G.J., GRIFFIN J.D., REINHHERZ E.L.:
RT "Cloning and expression of a gamma-interferon-inducible gene in
RT monocytes: a new member of a cytokine gene family.";
RL INT. IMMUNOL. 1:388-399(1989).
RN [6]
RP SEQUENCE FROM N.A.
RX MEDLINE: 94150478.
RA LI Y.S., SHYU Y.J., WRIGHT J.G., VALENTE A.J., CORNHILL J.F.,
RA KOLATTUKUDY P.E.:
RT "The expression of monocyte chemotactic protein (MCP-1) in human
RT vascular endothelium in vitro and in vivo.";
RL MOL. CELL. BIOCHEM. 126:61-68(1993).
RN [7]
RP SEQUENCE FROM N.A.
RX MEDLINE: 92095166.
RA YOSHIMURA T., LEONARD E.J.:
RT "Human monocyte chemoattractant protein-1 (MCP-1).";
RL ADV. EXP. MED. BIOL. 305:47-56(1991).
RN [8]
RP SEQUENCE OF 24-99.
RX MEDLINE: 89184525.
RA ROBINSON E.A., YOSHIMURA T., LEONARD E.J., TANAKA S., GRIFFIN P.R.,
RA SHABANOWITZ J., HUNT D.F., APPELLA E.:
RT "Complete amino acid sequence of a human monocyte chemoattractant, a
RT putative mediator of cellular immune reactions.";
RL PROC. NATL. ACAD. SCI. U.S.A. 86:1850-1854(1989).
RN [9]
RP SEQUENCE OF 29-53 AND 82-92.
RX MEDLINE: 90211336.
RA DECOCK B., CONINGS R., LENAERTS J.-P., BILIAU A., VAN DAMME J.:
RT "Identification of the monocyte chemotactic protein from human
RT osteosarcoma cells and monocytes: detection of a novel N-terminally
RT processed form.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 167:904-909(1990).
RN [10]
RP 3D-STRUCTURE MODELLING.
RX MEDLINE: 91312872.
RA GRONENBORN A.M., CLORE G.M.:
RT "Modeling the three-dimensional structure of the monocyte chemo-
RT attractant and activating protein MCAF/MCP-1 on the basis of the
RT solution structure of interleukin-8.";
RL PROTEIN ENG. 4:263-269(1991).
RN [11]
RP X-RAY CRYSTALLOGRAPHY (1.85 ANGSTROMS).
RX MEDLINE: 97143315.
RA LUBKOWSKI J., BUJACZ G., DOMAILLE P.J., HANDEL T.M., WLODAWER A.:
RT "The structure of MCP-1 in two crystal forms provides a rare example
RT of variable quaternary interactions.";
RL NAT. STRUCT. BIOL. 4:64-69(1997).
RN [12]
RP STRUCTURE BY NMR.
RX MEDLINE: 96234959.
RA HANDEL T.M., DOMAILLE P.J.:
RT "Heteronuclear (1H, 13C, 15N) NMR assignments and solution structure
RL of the monocyte chemoattractant protein-1 (MCP-1) dimer.";
RL BIOCHEMISTRY 35:6569-6584(1996).
RN [13]
RP EFFECT OF DELETION OF N-TERMINAL RESIDUES.
RX MEDLINE: 96195223.
RA WEBER W., UGUCCIONI M., BAGGIOLINI M., CLARK-LEWIS I., DAHINDEN C.A.:
RT "Deletion of the NH2-terminal residue converts monocyte chemotactic
RT protein 1 from an activator of basophil mediator release to an
RT eosinophil chemoattractant.";
RL J. EXP. MED. 183:681-685(1996).
RN [14]
RP MUTAGENESIS.
RX MEDLINE: 94253189.
RA ZHANG Y.J., RUTLEDGE B.J., ROLLINS B.J.:
RT "Structure/activity analysis of human monocyte chemoattractant
RT protein-1 (MCP-1) by mutagenesis. Identification of a mutated protein
RT that inhibits MCP-1-mediated monocyte chemotaxis.";
RL J. BIOL. CHEM. 269:15918-15924(1994).
RN [15]
RP SUBUNIT.
RX MEDLINE: 97053697.
RA KIM K.-S., RAJARATHNAM K., CLARK-LEWIS I., SYKES B.D.:
RT "Structural characterization of a monomeric chemokine: monocyte
RT chemoattractant protein-3.";
RL FEBS LETT. 395:277-282(1996).
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES AND BASOPHILS
CC BUT NOT NEUTROPHILS OR EOSINOPHILS. AUGMENTS MONOCYTE ANTI-TUMOR
CC ACTIVITY. HAS BEEN IMPLICATED IN THE PATHOGENESIS OF DISEASES
CC CHARACTERIZED BY MONOCYTIC INFILTRATES, LIKE PSORIASIS, RHEUMATOID
CC ARTHRITIS OR ATHEROSCLEROSIS. MAY BE INVOLVED IN THE RECRUITMENT
CC OF MONOCYTES INTO THE ARTERIAL WALL DURING THE DISEASE PROCESS OF
CC ATHEROSCLEROSIS.
CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM.
CC -!- PTM: PROCESSING AT THE N-TERMINUS CAN REGULATE RECEPTOR AND TARGET
CC CELL SELECTIVITY. DELETION OF THE AMINO- TERMINAL RESIDUE CONVERTS
CC IT FROM AN ACTIVATOR OF BASOPHIL TO AN EOSINOPHIL CHEMOATTRACTANT.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC -----
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CC or send an email to license@isb-sib.ch).
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DR EMBL: M31626; G386961; -
DR EMBL: M30816; G386961; JOINED.
DR EMBL: M31625; G386961; JOINED.
DR EMBL: M24545; G307163; -
DR EMBL: M28226; G338009; -
DR EMBL: X14768; G34514; -
DR EMBL: M37719; G487124; -
DR EMBL: M28225; G338007; -
DR EMBL: M28223; G338007; JOINED.
DR EMBL: M28224; G338007; JOINED.
DR EMBL: S69738; G545465; -
DR EMBL: S71513; G240868; -
DR EMBL: A17786; G641145; -
DR PIR: A35474; A35474.
DR PIR: S03339; S03339.
DR PDB: 1DOK; 12-MAR-97.
DR PDB: 1DOL; 12-MAR-97.
DR PDB: 1DOM; 14-OCT-96.
DR PDB: 1DON; 14-OCT-96.
DR PDB: 1MCA; 15-OCT-94.
DR MIW; 158105; -
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.

DR	EMLB; U29653; G1144186; -.
DR	PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR	PFAM; PF00048; i18; 1.
DR	HSP; P13500; IDON.
KW	CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE.
FT	SIGNAL 1 23 BY SIMILARITY.
FT	CHAIN 24 101 MONOCYTE CHEMOTACTIC PROTEIN 1.
FT	MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
FT	SMILARITY).
FT	DISULFID 34 59 BY SIMILARITY.
FT	DISULFID 35 75 BY SIMILARITY.
SQ	SEQUENCE 101 AA; 11121 MW; A7075B14 CRC32;
Query Match 94.7%; Score 90; DB 1; Length 101;	
Best Local Similarity 91.7%; Pred. No. 2.79e-08;	
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;	
Db	73 EICADPKQKWVQ 84
QY	1 EICADPTQKWVQ 12
RESULT 5 STANDARD; PRT; 99 AA.	
ID	MCPL_PIG
AC	P42831;
DT	01-NOV-1995 (REL. 32, CREATED)
DT	01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
DT	15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE	MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1).
GN	SCYA2.
OS	SUS SCROFA (PIG).
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC	ARTIODACTYLA; SUIFORMES; SUINA; SUIDAE; SUS.
RN	[1]
RP	SEQUENCE FROM N.A.
RX	MEDLINE; 94183284.
RA	HOSANG K., KNOKE I., KLAUDINY J., WEMPE F., WUTTKE W., SCHMIT K.H.;
RT	"Porcine luteal cells express monocyte chemoattractant protein-1
RT	(MCP-1): analysis by polymerase chain reaction and cDNA cloning.";
RL	BIOCHEM. BIOPHYS. RES. COMMUN. 199;962-968(1994).
RN	[2]
RP	SEQUENCE FROM N.A.
RC	TISSUE-BRAIN;
RA	ZACH O.R.F.;
RL	SUBMITTED (JUL-1994) TO EMBL/GENBANK/DBJ DATA BANKS.
CC	-!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
CC	NEUTROPHILS.
CC	-!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
CC	-!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC	C-C) (CHEMOKINE CC).
CC	-----
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CC	or send an email to license@isb-sib.ch).
CC	-----
EMLB; Z48479; G683717; -.	
EMLB; X79416; G872313; -.	
PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.	
PFAM; PF00048; i18; 1.	
HSP; P13500; IDON.	
KW	CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE.
FT	SIGNAL 1 23 BY SIMILARITY.
FT	CHAIN 24 99 MONOCYTE CHEMOTACTIC PROTEIN 1.
FT	MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
FT	SMILARITY).
FT	DISULFID 34 59 BY SIMILARITY.
FT	DISULFID 35 75 BY SIMILARITY.
SQ	SEQUENCE 99 AA; 10976 MW; ECC3AFB4 CRC32;

Query Match 93.7%; Score 89; DB 1; Length 99;
 Best Local Similarity 83.3%; Pred. No. 4.94e-08;
 Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 73 EICADPKQKWQ 84
 QY 1 EICADPTQKWQ 12

RESULT 6
 ID MCP2_BOVIN STANDARD; PRT; 99 AA.
 AC Q09141;
 DT 01-NOV-1995 (REL. 32, CREATED)
 DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DE MONOCYTE CHEMOTACTIC PROTEIN 2 PRECURSOR (MCP-2) (MONOCYTE
 CHEMOATTRACTANT PROTEIN 2).
 GN SCYA8 OR MCP2.
 OS BOS TAURUS (BOVINE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC ARTIODACTYLA; RUMINANTIA; PECORA; BOVOIDEA; BOVINAE; BOS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 94114084.
 RA WEMPE F., HANES J., SCHEIT K.H.;
 RT "Cloning of the gene for bovine monocyte chemoattractant protein-2.";
 RL DNA CELL BIOL. 13:1-8(1994).
 CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES. THIS PROTEIN
 CC CAN BIND HEPARIN.
 CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC -----
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 CC -----

DR EMBL; S67954; E118856; -.
 DR EMBL; S67956; G544997; -.
 DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSP; P80098; INCV.
 KW CYTOKINE; CHEMOTAXIS; SIGNAL; HEPARIN-BINDING; INFLAMMATORY RESPONSE.
 FT SIGNAL 1 23 BY SIMILARITY.
 FT CHAIN 24 99 MONOCYTE CHEMOTACTIC PROTEIN 2.
 FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
 FT SIMILARITY).
 FT DISULFID 34 59 BY SIMILARITY.
 FT DISULFID 35 75 BY SIMILARITY.
 SQ SEQUENCE 99 AA; 10900 MW; 9BAZCD26 CRC32;

Query Match 91.6%; Score 87; DB 1; Length 99;
 Best Local Similarity 75.0%; Pred. No. 1.54e-07;
 Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 73 DVCADPKQKWQ 84
 QY 1 EICADPTQKWQ 12

RESULT 7
 ID MCP4_HUMAN STANDARD; PRT; 98 AA.
 AC Q99616;
 DT 15-JUL-1998 (REL. 36, CREATED)
 DT 15-JUL-1998 (REL. 36, LAST SEQUENCE UPDATE)
 DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
 DE MONOCYTE CHEMOTACTIC PROTEIN 4 PRECURSOR (MCP-4) (MONOCYTE
 CHEMOATTRACTANT PROTEIN 4) (CK-BETA10) (NCC-1).
 GN SCYA13 OR MCP4 OR NCC1.

OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX TISSUE=HEART;
 RX MEDLINE; 97113354.
 RA GARCIA-ZEPEDA E.A., COMBADIERE C., ROTHENBERG M.E., SARAFI M.N.,
 RA LAVIGNE F., HAMID Q., MURPHY P.M., LUSTER A.D.;
 RT "Human monocyte chemoattractant protein (MCP)-4 is a novel CC
 RT chemokine with activities on monocytes, eosinophils, and basophils
 RT induced in allergic and nonallergic inflammation that signals through
 RT the CC chemokine receptors (CCR)-2 and -3.";
 RL J. IMMUNOL. 157:5613-5626(1996).
 RN [2]
 RP SEQUENCE FROM N.A., AND SEQUENCE OF 17-98.
 RX TISSUE=FETAL;
 RX MEDLINE; 96235049.
 RA UGUCCIONI M., LOETSCHER P., FORSSMANN U., DEWALD B., LI H., LIMA S.H.,
 RA LI Y., KREIDER B., GAROTTA G., THELEN M., BAGGIOLINI M.;
 RT "Monocyte chemotactic protein 4 (MCP-4), a novel structural and
 RT functional analogue of MCP-3 and eotaxin.";
 RL J. EXP. MED. 183:2379-2384(1996).
 RN [3]
 RP SEQUENCE FROM N.A., AND SEQUENCE OF 22-33.
 RX TISSUE=FETAL;
 RX MEDLINE; 97341179.
 RA BERKHOUT T.A., SARAU H.M., MOORES K., WHITE J.R., ELSHOUBAGY N.,
 RA APPELBAUM E., REAPE T.J., BRANNER M., MAKWANA J., FOLEY J.J.,
 RA SCHMIDT D.B., IMBURGIA C., MACNULTY D., MATTHEWS J., O'DONNELL K.,
 RA O'SHANNESY D., SCOTT M., GROOT P.H.E., MACPHEE C.;
 RT "Cloning, in vitro expression, and functional characterization of a
 RT novel human CC chemokine of the monocyte chemotactic protein (MCP)
 RT receptor 2B.";
 RL J. BIOL. CHEM. 272:16404-16413(1997).
 RN [4]
 RP SEQUENCE FROM N.A.
 RA DANTE M., GIBSON A.;
 RL SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [5]
 RP SEQUENCE FROM N.A.
 RX TISSUE=LUNG;
 RA POWER C.A., MEYER A., RISON S.C.G., GUYE-COULIN F., WELLS T.N.C.;
 RL SUBMITTED (DEC-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, LYMPHOCYTES,
 CC BASOPHILS AND EOSINOPHILS, BUT NOT NEUTROPHILS. SIGNALS THROUGH
 CC CCR2B AND CCR3 RECEPTORS. PLAYS A ROLE IN THE ACCUMULATION OF
 CC LEUKOCYTES AT BOTH SIDES OF ALLERGIC AND NONALLERGIC INFLAMMATION.
 CC MAY BE INVOLVED IN THE RECRUITMENT OF MONOCYTES INTO THE ARTERIAL
 CC WALL DURING THE DISEASE PROCESS OF ARTEROSCLEROSIS. MAY PLAY A
 CC ROLE IN THE MONOCYTE ATTRACTION IN TISSUES CHRONICALLY EXPOSED TO
 CC EXOGENOUS PATHOGENS.
 CC -!- MASS SPECTROMETRY: MW=9314; MW_ERR=30; METHOD=MALDI; RANGE=17-98.
 CC -!- MASS SPECTROMETRY: MW=8760; MW_ERR=30; METHOD=MALDI; RANGE=22-98.
 CC -!- MASS SPECTROMETRY: MW=8575; MW_ERR=30; METHOD=MALDI; RANGE=24-98.
 CC -!- INDUCTION: BY INTERLEUKIN-1 AND TNF-ALPHA.
 CC -!- TISSUE SPECIFICITY: WIDELY EXPRESSED. FOUND IN SMALL INTESTINE,
 CC THYMUS, COLON, LUNG, TRACHEA, STOMACH AND LYMPH NODE. LOW LEVELS
 CC SEEN IN THE PULMONARY ARTERY SMOOTH MUSCLE CELLS.
 CC -!- THIS PROTEIN CAN BIND HEPARIN.
 CC -!- PTM: ONE MAJOR ISOFORM MCP-4, AND TWO MINOR ISOFORMS (LA)MCP-4 AND
 CC (FNPOGLA)MCP-4 ARE PRODUCED BY DIFFERENTIAL SIGNAL CLEAVAGE.
 CC (LA)MCP-4 IS ABOUT 30 FOLD LESS ACTIVE THAN MCP-4.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
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CC
DR EMBL; U46767; G1732123; -
DR EMBL; AC002482; G2340091; -
DR EMBL; X98306; E248571; -
DR MIM; G01391; -
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; i18; 1.
DR HSP; P13500; 1DOL.
KW CYTOKINE; CHEMOTAXIS; SIGNAL; GLYCOPROTEIN; INFLAMMATORY RESPONSE.
FT SIGNAL 1 23
FT CHAIN 24 98 MONOCYTE CHEMOTACTIC PROTEIN 4.
FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID.
FT DISULFID 34 58 BY SIMILARITY.
FT DISULFID 35 74 BY SIMILARITY.
FT CARBOHYD 29 29 POTENTIAL.
SQ SEQUENCE 98 AA; 10986 MW; DF52F6EC CRC32;

Query Match 90.5%; Score 86; DB 1; Length 98;
Best Local Similarity 83.3%; Pred. No. 2.70e-07;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 72 EICADPKKQWQ 83
QY 1 EICADPTQKWQ 12

RESULT 8
ID MCP2_PIG STANDARD; PRT; 99 AA.
AC P49873;
DT 01-OCT-1996 (REL. 34, CREATED)
DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 2 PRECURSOR (MCP-2) (MONOCYTE
DE CHEMOATTRACTANT PROTEIN 2).
GN SCY48 OR MCP2.
OS SCROFA (FIG).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC ARTIODACTYLA; SUIFORMES; SUINA; SUIDAE; SUS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 95091716.
RA HOSANG K.K., KNOKE I.I., KLAUDINY J.J., WEMPE F.F., WUTTKA W.W.,
RA SCHEIT K.K.;
RT "Porcine luteal cells express monocyte chemoattractant protein-2
RT (MCP-2): analysis by cDNA cloning and northern analysis.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 205:148-153(1994).
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES. THIS PROTEIN
CC CAN BIND HEPARIN.
CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC
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CC
CC EMBL; Z48480; G683719; -
CC PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
CC PFAM; PF00048; i18; 1.
CC HSP; P80098; 1NCV.
KW CYTOKINE; CHEMOTAXIS; SIGNAL; HEPARIN-BINDING; INFLAMMATORY RESPONSE.
FT SIGNAL 1 23
FT CHAIN 24 99 MONOCYTE CHEMOTACTIC PROTEIN 2.
FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
FT SIMILARITY).
FT DISULFID 34 59 BY SIMILARITY.
FT DISULFID 35 75 BY SIMILARITY.
SQ SEQUENCE 99 AA; 10903 MW; B7620BCF CRC32;

Query Match 90.5%; Score 86; DB 1; Length 99;
Best Local Similarity 83.3%; Pred. No. 2.70e-07;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 73 EVCADPQKQWQ 84
QY 1 EICADPTQKWQ 12

RESULT 9
ID MCPA_BOVIN STANDARD; PRT; 99 AA.
AC P28291;
DT 01-DEC-1992 (REL. 24, CREATED)
DT 01-DEC-1992 (REL. 24, LAST SEQUENCE UPDATE)
DT 01-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 1A PRECURSOR (MCP-1A) (ACIDIC
DE SEMINAL FLUID PROTEIN).
OS BOS TAURUS (BOVINE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC ARTIODACTYLA; RUMINANTIA; PECORA; BOVIDAE; BOVINAE; BOS.
RN [1]
RP SEQUENCE FROM N.A.
RX TISSUE-SEMINAL PLASMA;
RX MEDLINE; 92096117.
RA WEMPE F., HENSCHEN A., SCHEIT K.H.;
RT "Gene expression and cDNA cloning identified a major basic protein
RT constituent of bovine seminal plasma as bovine
RT monocyte-chemoattractant protein-1 (MCP-1).";
RL DNA CELL BIOL. 10:671-679(1991).
RN [2]
RP SEQUENCE FROM N.A.
RX TISSUE-SEMINAL PLASMA;
RX MEDLINE; 92181448.
RA WEMPE F., EINSPANIER R., SCHEIT K.H.;
RT "Characterization by cDNA cloning of the mRNA of a new growth factor
RT from bovine seminal plasma: acidic seminal fluid protein.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 183:232-237(1992).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE; 94338337.
RA WEMPE F., KUHLMANN J.K., SCHEIT K.H.;
RT "Characterization of the bovine monocyte chemoattractant protein-1
RT gene";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 202:1272-1279(1994).
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
CC NEUTROPHILS.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC
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CC
CC EMBL; L32659; G624394; -
CC EMBL; M84602; G163395; -
CC PIR; A39296; A39296.
CC PIR; JC2336; JC2336.
CC PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
CC PFAM; PF00048; i18; 1.
CC HSP; P13500; 1DON.
KW CYTOKINE; CHEMOTAXIS; SIGNAL.
FT SIGNAL 1 23
FT CHAIN 24 99 MONOCYTE CHEMOTACTIC PROTEIN 1A.
FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
FT SIMILARITY).
FT DISULFID 34 59 BY SIMILARITY.
FT DISULFID 35 75 BY SIMILARITY.
SQ SEQUENCE 99 AA; 11114 MW; C8F5821D CRC32;

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Query Match      89.5%; Score 85; DB 1; Length 99;
Best Local Similarity 83.3%; Pred. No. 4.73e-07;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 73 EICADPKQKVVQ 84
   1 EICADPTQKVVQ 12

RESULT 10
ID MCPL1_RABBIT STANDARD; PRT; 125 AA.
AC P28292;
DT 01-DEC-1992 (REL. 24, CREATED)
DT 01-DEC-1992 (REL. 24, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1).
GN SCV42.
OS ORYCTOLAGUS CUNICULUS (RABBIT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC LAGOMORPHA; LEPORIDAE; ORYCTOLAGUS.
RN [1]
RP SEQUENCE FROM N.A.
RA STRAIN-NEW ZEALAND WHITE; TISSUE-SPLEEN;
RX MEDLINE: 91225489.
RA YOSHIMURA T., YUHKI N.;
RT "Neutrophil attractant/activation protein-1 and monocyte
RT chemoattractant protein-1 in rabbit. cDNA cloning and their
RT expression in spleen cells.";
RL J. IMMUNOL. 146:3483-3488(1991).
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
CC NEUTROPHILS.
CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
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EMBL: M57440; G165470;
PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
PFAM: PF00048; i18; 1.
HSP: P13500; IDON.
CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE; GLYCOPROTEIN.
FT SIGNAL 1 23 BY SIMILARITY.
FT MOD_RES 24 125 MONOCYTE CHEMOTACTIC PROTEIN 1.
FT CHAIN 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
FT MOD_RES 24 24 SIMILARITY).
FT DISULFID 34 59 BY SIMILARITY.
FT DISULFID 35 75 BY SIMILARITY.
FT CARBOHYD 40 40 POTENTIAL.
FT CARBOHYD 55 55 POTENTIAL.
FT CARBOHYD 112 112 POTENTIAL.
SQ SEQUENCE 125 AA; 13776 MW; FBAC9D27 CRC32;

Query Match      88.4%; Score 84; DB 1; Length 125;
Best Local Similarity 90.9%; Pred. No. 8.27e-07;
Matches 10; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 74 ICADPKQKVVQ 84
   2 ICADPTQKVVQ 12

RESULT 11
ID EOTA_RAT STANDARD; PRT; 97 AA.
AC P97545; O08780;
DT 15-JUL-1998 (REL. 36, CREATED)

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RT endothelial cells and in interleukin 4-induced tumor suppression.;"

RL PROC. NATL. ACAD. SCI. U.S.A. 92:8960-8964(1995)."

RN [2]

RP SEQUENCE FROM N.A.

RC STRAIN=C57BL/6J; TISSUE=LUNG;

RX MEDLINE; 96158746.

RA GONZALO J.-A., JIA G.-Q., AGUIRRE V., FRIEND D., COYLE A.J.,

RA JENKINS N.A., LIN G.-S., KATZ H., LICHTMAN A., COPELAND N.G., KOPF M.,

RA GUTIERREZ-RAMOS J.-C.;

RT "Mouse eotaxin expression parallels eosinophil accumulation during

RT lung allergic inflammation but it is not restricted to a Th2-type

RT response.;"

RL IMMUNITY 4:1-14(1996).

CC -!- FUNCTION: IN RESPONSE TO THE PRESENCE OF ALLERGENS, THIS PROTEIN

CC DIRECTLY PROMOTES THE ACCUMULATION OF EOSINOPHILS (A PROMINENT

CC FEATURE OF ALLERGIC INFLAMMATORY REACTIONS), BUT NOT

CC LYMPHOCYTES, MACROPHAGES OR NEUTROPHILS.

CC -!- SUBCELLULAR LOCATION: EXTRACELLULAR.

CC -!- TISSUE SPECIFICITY: EXPRESSED CONSTITUTIVELY IN THE THYMUS.

CC EXPRESSION INDUCIBLE IN THE LUNG (TYPE I ALVEOLAR EPITHELIAL

CC CELLS), INTESTINE, HEART, SPLEEN, KIDNEY.

CC -!- INDUCTION: BY INTERFERON-GAMMA AND LIPOPOLYSACCHARIDE (LPS).

CC -!- PTM: O-GLYCOSYLATED (PROBABLE).

CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE

CC C-C) (CHEMOKINE CC).

CC -----

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CC -----

CC EMBL: U26426; G959511;

DR EMBL: U40672; G113937;

DR MGD; MGI:103576; SCYAL.

DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.

DR PFAM; PF00048; i18; 1.

DR HSP; P80098; INCV.

KW EOSINOPHIL; CYTOKINE; CHEMOTAXIS; GLYCOPROTEIN; SIGNAL;

KW INFLAMMATORY RESPONSE

FT SIGNAL 1 23 POTENTIAL.

FT CHAIN 24 97 EOTAXIN.

FT DISULFID 32 57 BY SIMILARITY.

FT DISULFID 33 73 BY SIMILARITY.

SQ SEQUENCE 97 AA; 10893 MW; F85A96BC CRC32;

Query Match 87.4%; Score 83; DB 1; Length 97;

Best Local Similarity 83.3%; Pred. No. 1.44e-06;

Matches 10; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Db 71 EICADPKKKWQ 82

QY 1 EICADPTQKWQ 12

||||| |||

RESULT 13

ID EOTA_HUMAN STANDARD; PRT; 97 AA.

AC P51671; P50877; Q92490; Q92491;

DT 01-OCT-1996 (REL. 34, CREATED)

DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)

DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)

DE EOTAXIN PRECURSOR (EOSINOPHIL CHEMOTACTIC PROTEIN).

GN SCYAL.

OS HOMO SAPIENS (HUMAN).

OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;

OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.

RN [1]

RP SEQUENCE FROM N.A.

RX MEDLINE; 96181758.

RA GARCIA-ZEPEDA E.A., ROTHENBERG M.E., OWNBEY T.R., LEDER P.,

RA LUSTER A.D.;

"Human eotaxin is a specific chemoattractant for eosinophil cells and provides a new mechanism to explain tissue eosinophilia.;"

NAT. MED. 2:449-456(1996).

RN [2]

RP SEQUENCE FROM N.A.

RX MEDLINE; 96189937.

RA PONATH P.D., OIN S., RINGLER D.J., CLARK-LEWIS I., WANG J., KASSAM N.,

RA SMITH H., SHI X., GONZALO J.A., NEWMAN W., GUTIERREZ-RAMOS J.C.,

RA MACKAY C.R.;

RT "Cloning of the human eosinophil chemoattractant, eotaxin.

RT Expression, receptor binding, and functional properties suggest a

RT mechanism for the selective recruitment of eosinophils.;"

RL J. CLIN. INVEST. 97:604-612(1996).

CC [3]

CC SEQUENCE FROM N.A.

CC TISSUE=SMALL INTESTINE;

CC MEDLINE; 96205964.

CC KITAHARA M., NAKAJIMA T., IMAI T., HARADA S., COMBADIÈRE C.,

CC TIFFANY H.L., MURPHY P.M., YOSHIE O.;

CC "Molecular cloning of human eotaxin, an eosinophil-selective CC

CC chemokine, and identification of a specific eosinophil eotaxin

CC receptor, CC chemokine receptor 3.;"

CC J. BIOL. CHEM. 271:7725-7730(1996).

CC [4]

CC SEQUENCE FROM N.A., SEQUENCE OF 60-65 AND 75-88, AND VARIANTS.

CC TISSUE=FORESKIN;

CC MEDLINE; 96374440.

CC BARTELS J., SCHLUETER C., RICHTER E., NOSO N., KULKE R.,

CC CHRISTOPHERS E., SCHROEDER J.M.;

CC "Human dermal fibroblasts express eotaxin: molecular cloning, mRNA

CC expression, and identification of eotaxin sequence variants.;"

CC BIOCHEM. BIOPHYS. RES. COMMUN. 225:1045-1051(1996).

CC [5]

CC SEQUENCE FROM N.A.

CC TISSUE=PLACENTA;

CC MEDLINE; 97312708.

CC GARCIA-ZEPEDA E.A., ROTHENBERG M.E., WEREMOWICZ S., SARAFI M.N.,

CC MORTON C.C., LUSTER A.D.;

CC "Genomic organization, complete sequence, and chromosomal location of

CC the gene for human eotaxin (SCYAL), an eosinophil-specific CC

CC chemokine.;"

CC GENOMICS 41:471-476(1997).

CC [6]

CC SEQUENCE FROM N.A.

CC TISSUE=LUNG;

CC MEDLINE; 97445071.

CC HEIN H., SCHLUETER C., KULKE R., CHRISTOPHERS E., SCHROEDER J.M.,

CC BARTELS J.;

CC "Genomic organization, sequence, and transcriptional regulation of

CC the human eotaxin gene.;"

CC BIOCHEM. BIOPHYS. RES. COMMUN. 237:537-542(1997).

CC [7]

CC STRUCTURE BY NMR.

CC MEDLINE; 9830469.

CC CRUMP M.P., RAJARATHNAM K., KIM K.S., CLARK-LEWIS I., SYKES B.D.;

CC "Solution structure of eotaxin, a chemokine that selectively recruits

CC eosinophils in allergic inflammation.;"

CC BIOCHEMISTRY 37:11670-11678(1998).

CC -!- FUNCTION: IN RESPONSE TO THE PRESENCE OF ALLERGENS, THIS PROTEIN

CC DIRECTLY PROMOTES THE ACCUMULATION OF EOSINOPHILS, A PROMINENT

CC FEATURE OF ALLERGIC INFLAMMATORY REACTIONS.

CC -!- SUBCELLULAR LOCATION: EXTRACELLULAR.

CC -!- PTM: O-GLYCOSYLATED (PROBABLE).

CC -!- INDUCTION: BY TNF-ALPHA, IL-1-ALPHA AND INTERFERON GAMMA.

CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE

CC C-C) (CHEMOKINE CC).

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CC CHEMOKINE THAT SIGNALS THROUGH CCR2. INVOLVED IN ALLERGIC
CC INFLAMMATION AND THE HOST RESPONSE TO PATHOGENS AND MAY PLAY A
CC PIVOTAL ROLE DURING EARLY STAGES OF ALLERGIC LUNG INFLAMMATION.
CC -1- SUBUNIT: HOMODIMER (BY SIMILARITY).
CC -1- TISSUE SPECIFICITY: PREDOMINANTLY EXPRESSED IN THE LYMPH NODES AND
CC THYMUS. ALSO FOUND IN THE SALIVARY GLANDS CONTAINING LYMPH NODES,
CC BREAST, HEART, LUNG, BRAIN, SMALL INTESTINE, KIDNEY AND COLON.
CC -1- INDUCTION: BY IFN-GAMMA AND LIPOPOLYSACCHARIDE (LPS).
CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
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CC -----
DR EMBL: U50712; G1477582; -;
DR EMBL: U66670; G1881583; -;
DR MGD: MGI:108224; SCYAL2.
DR PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM: PF00048; i18; 1.
DR HSP: P13500; IDOL.
KW CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE.
FT SIGNAL 1 22 BY SIMILARITY.
FT CHAIN 23 104 MONOCYTE CHEMOTACTIC PROTEIN 5.
FT DISULFID 33 58 BY SIMILARITY.
FT DISULFID 34 74 BY SIMILARITY.
SQ SEQUENCE 104 AA; 11659 MW; 08FA6C35 CRC32;

Query Match 83.2%; Score 79; DB 1; Length 104;
Best Local Similarity 81.8%; Pred. No. 1.30e-05;
Matches 9; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 72 EICADPKKQWV 82
QY 1 EICADPTQKQWV 11
|||||:||||

Search completed: Fri Feb 4 17:45:21 2000
Job time : 6 secs.


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#introns 36/1; 75/2
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS cytokine; glycoprotein; inflammation
FEATURE
1-33 #domain signal sequence #status predicted #label SIG\
34-109 #product monocyte chemotactic protein 3 #status
#predicted #label MAT\
39 #binding_site carbohydrate (Asn) (covalent) #status
#predicted
SUMMARY #length 109 #molecular_weight 12356 #checksum 1535
Query Match 100.0%; Score 95; DB 2; Length 109;
Best Local Similarity 100.0%; Pred. No. 3.20e-08;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 83 EICADPTQKWQV 94
|:|||||
Qy 1 EICADPTQKWQV 12

RESULT 2
ENTRY I48147 #type complete
TITLE monocyte chemoattractant protein-1 - guinea pig
ORGANISM #formal_name Cavia porcellus #common_name guinea pig
DATE 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change
09-May-1997
ACCESSIONS I48147
REFERENCE I48147
#authors Yoshimura, T.
#journal J. Immunol. (1993) 150:5025-5032
#title cDNA cloning of guinea pig monocyte chemoattractant protein-1
and expression of the recombinant protein.
#cross-references MUID:93267104
#accession I48147
#status preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-120 #label RES
#cross-references GB:L04985; NID:g349820; PID:g349821
GENETICS MCP-1
#gene
CLASSIFICATION #superfamily macrophage inflammatory protein
SUMMARY #length 120 #molecular_weight 13741 #checksum 9252
Query Match 97.9%; Score 93; DB 2; Length 120;
Best Local Similarity 91.7%; Pred. No. 9.07e-08;
Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 71 EVCADPTQKWQV 82
|:|||||
Qy 1 EICADPTQKWQV 12

RESULT 3
ENTRY A60299 #type complete
TITLE monocyte chemoattractant protein 1 precursor - human
ALTERNATE_NAMES GDCF-1; glioma-derived monocyte chemotactic factor 1; MCAF;
MCP-1; monocyte chemotactic factor 1; monocyte secretory
protein; tumor-derived chemotactic factor
glioma-derived chemotactic factor 2 (GDCF-2)
ORGANISM #formal_name Homo sapiens #common_name man
DATE 20-Feb-1993 #sequence_revision 20-Feb-1993 #text_change
20-Mar-1998
ACCESSIONS A35474; A33476; S03339; I51841; A60299; A32300; A32396;
A34561; I57488; JCL1096
REFERENCE A35474
#authors Shyy, Y.-J.; Li, Y.-S.; Kolattukudy, P.E.
#journal Biochem. Biophys. Res. Commun. (1990) 169:346-351
#title Structure of human monocyte chemotactic protein gene and its
regulation by TPA.
#cross-references MUID:90290466
#accession A35474
#molecule_type DNA
#residues 1-99 #label SHV

```

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#cross-references GB:M37719; NID:g187447; PID:g487124
REFERENCE A33476
#authors Rollins, B.J.; Stier, P.; Ernst, T.; Wong, G.G.
#journal Mol. Cell. Biol. (1989) 9:4687-4695
#title The human homolog of the JE gene encodes a monocyte secretory
protein.
#cross-references MUID:90097880
#accession A33476
#molecule_type mRNA
#residues 1-99 #label ROL
#cross-references GB:M30816; GB:M31625; GB:M31626; NID:g188701;
PID:g386961
REFERENCE S03339
#authors Yoshimura, T.; Yuhki, N.; Moore, S.K.; Appella, E.; Lerman,
M.I.; Leonard, E.J.
#journal FEBS Lett. (1989) 244:487-493
#title Human monocyte chemoattractant protein-1 (MCP-1). Full-length
cDNA cloning, expression in mitogen-stimulated blood
mononuclear leukocytes, and sequence similarity to mouse
competence gene JE.
#cross-references MUID:89153605
#accession S03339
#status not compared with conceptual translation
#molecule_type mRNA
#residues 1-99 #label YOS
#cross-references GB:X14788; NID:g34513; PID:g34514
#experimental_source glioma cell line U-105MG
REFERENCE I51841
#authors Yoshimura, T.; Leonard, E.J.
#journal Adv. Exp. Med. Biol. (1991) 305:47-56
#title Human monocyte chemoattractant protein-1 (MCP-1).
#cross-references MUID:92095166
#accession I51841
#status preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-99 #label YO2
#cross-references GB:S71513; NID:g240867; PID:g240868
REFERENCE A60299
#authors Bottazzi, B.; Colotta, F.; Sica, A.; Nobili, N.; Mantovani,
A.
#journal Int. J. Cancer (1990) 45:795-797
#title A chemoattractant expressed in human sarcoma cells
(tumor-derived chemotactic factor, TDCF) is identical to
monocyte chemoattractant protein-1/monocyte chemotactic and
activating factor (MCP-1/MCAF).
#accession A60299
#status not compared with conceptual translation
#molecule_type mRNA
#residues 1-99 #label BOT
REFERENCE A32300
#authors Furutani, Y.; Nomura, H.; Notake, M.; Oyamada, Y.; Fukui, T.;
Yamada, M.; Larsen, C.G.; Oppenheim, J.J.; Matsushima, K.
#journal Biochem. Biophys. Res. Commun. (1989) 159:249-255
#title Cloning and sequencing of the cDNA for human monocyte
chemotactic and activating factor (MCAF).
#cross-references MUID:89165862
#accession A32300
#status not compared with conceptual translation
#molecule_type mRNA
#residues 1-99 #label FUR
#cross-references GB:M24545; NID:g187434; PID:g307163
REFERENCE A32396
#authors Robinson, E.A.; Yoshimura, T.; Leonard, E.J.; Tanaka, S.;
Griffin, P.R.; Shabanowitz, J.; Hunt, D.E.; Appella, E.
#journal Proc. Natl. Acad. Sci. U.S.A. (1989) 86:1850-1854
#title Complete amino acid sequence of a human monocyte
chemoattractant, a putative mediator of cellular immune
reactions.
#cross-references MUID:89184525
#accession A32396
#molecule_type protein
#residues 1-25-99 #label ROB
REFERENCE A34561

```

```
#authors Decock, B.; Conings, R.; Lenaerts, J.P.; Billiau, A.; Van
Damme, J.
#journal Biochem. Biophys. Res. Commun. (1990) 167:904-909
#title Identification of the monocyte chemotactic protein from human
osteosarcoma cells and monocytes: detection of a novel
N-terminally processed form.
#cross-references MUID:90211336
#accession A34561
##molecule_type protein
##residues 29-33, 'XX', 36-52, 82-92 ##label DEC
REFERENCE I57488
#authors Li, Y.S.; Shyy, Y.J.; Wright, J.G.; Valente, A.J.; Cornhill,
J.F.; Kolatukudy, P.E.
#journal Mol. Cell. Biochem. (1993) 126:61-68
#title The expression of monocyte chemotactic protein (MCP-1) in
human vascular endothelium in vitro and in vivo.
#cross-references MUID:94150478
#accession I57488
##molecule_type mRNA
##residues translated from GB/EMBL/DBJ
#status 1-99 ##label LIY
#cross-references GB:S69738; NID:g545464; PID:g545465
REFERENCE JC1096
#authors Ye, Q.N.; Su, G.F.; Yuan, Y.; Huang, C.F.
#journal Chinese J. Microbiol. Immunol. (1994) 14:29-32
#title The PCR, cloning and sequencing of human monocyte
chemoattractant protein-1 (MCP-1) gene.
#accession JC1096
##molecule_type mRNA
##residues 24-28, 'Q', 30-99 ##label YEQ
GENETICS
#gene GDB:SCYA2
#map_position 17q11.2-17q12
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS cytokine; glycoprotein; inflammation; pyroglutamic acid
FEATURE
1-23 #domain signal sequence #status predicted #label SIG\
24-99 #product monocyte chemoattractant protein 1 #status
experimental #label MAT\
#status experimental #label MAT2\
#modified_site pyrrolidone carboxylic acid (Gln) (in
mature form) #status experimental\
#binding_site carbohydrate (Asn) (covalent) #status
predicted
SUMMARY #length 99 #molecular-weight 11025 #checksum 7984
Query Match 94.7%; Score 90; DB 2; Length 99;
Best Local Similarity 91.7%; Pred. No. 4.27e-07;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Db 73 EICADPQKQWV 84
1-23 ||||| |||||
QY 1 EICADPTQKQWV 12
RESULT 4
ENTRY #type complete
TITLE monocyte chemoattractant protein-1 precursor - pig
#formal_name Sus scrofa domestica #common_name domestic pig
30-Sep-1993 #sequence_revision 20-Aug-1994 #text_change
17-Mar-1999
ACCESSIONS JC2136; S57498
REFERENCE JC2136
#authors Hosang, K.; Knoke, I.; Klaudiny, J.; Wempe, F.; Wuttke, W.;
Scheit, K.H.
#journal Biochem. Biophys. Res. Commun. (1994) 199:962-968
#title Porcine luteal cells express monocyte chemoattractant
protein-1 (MCP-1): Analysis by polymerase chain reaction
and cDNA cloning.
#cross-references MUID:94183284
#accession JC2136
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##molecule_type mRNA
##residues 1-99 ##label HOS
REFERENCE S57497
#authors Zach, O.
#submission submitted to the EMBL Data Library, July 1994
#accession S57498
#status preliminary
##molecule_type mRNA
##residues 1-99 ##label ZAC
#cross-references EMBL:X79416; NID:g872312; PID:g872313
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS glycoprotein
FEATURE
1-23 #domain signal sequence #status predicted #label SIG\
24-99 #product monocyte chemoattractant protein-1 #status
predicted #label MAT\
#binding_site carbohydrate (Asn) (covalent) #status
predicted
SUMMARY #length 99 #molecular-weight 10976 #checksum 9768
Query Match 93.7%; Score 89; DB 2; Length 99;
Best Local Similarity 83.3%; Pred. No. 7.13e-07;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
Db 73 EICADPQKQWV 84
1-23 ||||| |||||
QY 1 EICADPTQKQWV 12
RESULT 5
ENTRY #type complete
TITLE monocyte chemoattractant protein-2 precursor - pig
#formal_name Sus scrofa domestica #common_name domestic pig
24-Feb-1995 #sequence_revision 24-Feb-1995 #text_change
17-Mar-1999
ACCESSIONS JC2417
REFERENCE JC2417
#authors Hosang, K.; Knoke, I.; Klaudiny, J.; Wempe, F.; Wuttke, W.;
Scheit, K.H.
#journal Biochem. Biophys. Res. Commun. (1994) 205:148-153
#title Porcine luteal cells express monocyte chemoattractant
protein-2 (MCP-2): Analysis by cDNA cloning and northern
analysis.
#cross-references MUID:95091716
#accession JC2417
##molecule_type mRNA
##residues 1-99 ##label HOS
#experimental_source corpus luteum
CLASSIFICATION #superfamily macrophage inflammatory protein
FEATURE
1-23 #domain signal sequence #status predicted #label SIG\
24-99 #product monocyte chemoattractant protein-2 #status
predicted #label MAT\
SUMMARY #length 99 #molecular-weight 10903 #checksum 7556
Query Match 90.5%; Score 86; DB 2; Length 99;
Best Local Similarity 83.3%; Pred. No. 3.28e-06;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
Db 73 EVCADPQKQWV 84
1-23 ||||| |||||
QY 1 EICADPTQKQWV 12
RESULT 6
ENTRY #type complete
TITLE monocyte chemoattractant protein 1 precursor - bovine
ALTERNATE_NAMES monocyte chemotactic factor 1; seminal plasma protein P6
#formal_name Bos primigenius taurus #common_name cattle
03-Aug-1992 #sequence_revision 03-Aug-1992 #text_change
31-Oct-1997
ACCESSIONS A39296; B39296
REFERENCE A39296
```

```

#authors      Wempe, F.; Henschen, A.; Scheit, K.H.
#journal      DNA Cell Biol. (1991) 10:671-679
#title        Gene expression and cDNA cloning identified a major basic
               protein constituent of bovine seminal plasma as bovine
               monocyte-chemoattractant protein-1 (MCP-1).
#cross-references MUID:92096117
#accession     A39296
#molecule_type mRNA
#residues      1-99 #label WEM
#cross-references GB:M84502; GB:M85264; NID:g163394; PID:g163395
#accession     B39296
#molecule_type protein
#residues      50-68,'X',70-74,'X',76 #label WE2
#experimental_source seminal vesicle
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS       glycoprotein
FEATURE        1-23
               24-99
94             #domain signal sequence #status predicted #label SIG\
               #product monocyte chemoattractant protein 1 #status
               #predicted #label MAT\
               #binding_site carbohydrate (Asn) (covalent) #status
               predicted
SUMMARY        #length 99 #molecular-weight 11114 #checksum 9401

Query Match      89.5%; Score 85; DB 2; Length 99;
Best Local Similarity 83.3%; Pred. No. 5,44e-06;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 73 ELCADPKQKWQ 84
   1:|||||
Qy 1 EICADPTQKWQ 12

RESULT 7
ENTRY   JC2336
TITLE   monocyte chemoattractant protein-1 - bovine
ORGANISM #formal_name Bos primigenius indicus #common_name zebu cattle
DATE     20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change
03-May-1996
ACCESSIONS JC2336
REFERENCE   JC2336
#authors    Wempe, F.; Kuhlmann, J.K.; Scheit, K.H.
#journal     Biochem. Biophys. Res. Commun. (1994) 202:1272-1279
#title       Characterization of the bovine monocyte chemoattractant
               protein-1 gene.
#cross-references MUID:94338337
#accession   JC2336
#molecule_type protein
#residues    1-99 #label WEM
GENETICS     MCP-1
#gene        26/1; 65/2
#introns
CLASSIFICATION #superfamily macrophage inflammatory protein
SUMMARY       #length 99 #molecular-weight 11114 #checksum 9401

Query Match      89.5%; Score 85; DB 2; Length 99;
Best Local Similarity 83.3%; Pred. No. 5,44e-06;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 73 ELCADPKQKWQ 84
   1:|||||
Qy 1 EICADPTQKWQ 12

RESULT 8
ENTRY   I46857
TITLE   monocyte chemoattractant protein-1 - rabbit
ORGANISM #formal_name Oryctolagus cuniculus #common_name domestic
               rabbit
DATE     14-Feb-1997 #sequence_revision 14-Feb-1997 #text_change
09-May-1997
ACCESSIONS I46857
REFERENCE   I46857
#authors    Ishikawa, J.; Suzuki, S.; Hotta, K.; Hirota, Y.; Mizuno, S.;
               Gene (1993) 131:305-306
               Cloning of a canine gene homologous to the human
               interleukin-8-encoding gene.

#authors      Yoshimura, T.; Yuhki, N.
#journal      J. Immunol. (1991) 146:3483-3488
#title        Neutrophil attractant/activation protein-1 and monocyte
               chemoattractant protein-1 in rabbit: cDNA cloning and their
               expression in spleen cells.
#cross-references MUID:91225489
#accession     I46857
#molecule_type mRNA
#residues      1-125 #label YOS
#cross-references GB:M57440; NID:g165469; PID:g165470
CLASSIFICATION #superfamily macrophage inflammatory protein
SUMMARY       #length 125 #molecular-weight 13776 #checksum 4498

Query Match      88.4%; Score 84; DB 2; Length 125;
Best Local Similarity 90.9%; Pred. No. 8,99e-06;
Matches 10; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 74 ICADPKQKWQ 84
   1:|||||
Qy 2 ICADPTQKWQ 12

RESULT 9
ENTRY   JC4912
TITLE   eotaxin precursor - human
ORGANISM #formal_name Homo sapiens #common_name man
DATE     01-Nov-1996 #sequence_revision 01-Nov-1996 #text_change
13-Nov-1998
ACCESSIONS JC4912
REFERENCE   JC4912
#authors    Bartels, J.; Schlueter, C.; Richter, E.; Noso, N.; Kulke, R.;
               Christophers, E.; Schroeder, J.M.
#journal     Biochem. Biophys. Res. Commun. (1996) 225:1045-1051
#title       Human dermal fibroblasts express eotaxin: Molecular cloning,
               mRNA expression, and identification of eotaxin sequence
               variants.
#accession   JC4912
#molecule_type mRNA
#residues      1-97 #label BAR
#cross-references EMBL:Z75568; NID:g1531982; PID:e251275; PID:g1531983
#experimental_source dermal fibroblast
COMMENT      This protein has eosinophil specific chemotactic activity.
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS      fibroblast
FEATURE        1-18
               19-97
SUMMARY       #domain signal sequence #status predicted #label SIG\
               #product eotaxin #status predicted #label MAT
               #length 97 #molecular-weight 10790 #checksum 448

Query Match      83.2%; Score 79; DB 2; Length 97;
Best Local Similarity 66.7%; Pred. No. 1.07e-04;
Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 71 DICADPKRWQ 82
   1:|||||
Qy 1 EICADPTQKWQ 12

RESULT 10
ENTRY   JN0841
TITLE   interleukin-8 - dog
ORGANISM #formal_name Canis lupus familiaris #common_name dog
DATE     19-May-1994 #sequence_revision 19-May-1994 #text_change
12-Apr-1995
ACCESSIONS JN0841
REFERENCE   JN0841
#authors    Ishikawa, J.; Suzuki, S.; Hotta, K.; Hirota, Y.; Mizuno, S.;
               Gene (1993) 131:305-306
               Cloning of a canine gene homologous to the human
               interleukin-8-encoding gene.

```

```

#cross-references MUID:94010328
#accession JN0841
##molecule_type DNA
##residues 1-95 ##label ISH
##cross-references EMBL:U18941; NID:g687655; PID:g687656
COMMENT This protein is a polymorphonuclear leukocytes chemotactic factor
and is involved in the host defense function.
GENETICS
#introns 22/1; 67/2
CLASSIFICATION #superfamily beta-thromboglobulin
#length 95 #molecular-weight 10611 #checksum 3157
SUMMARY
Query Match 81.1%; Score 77; DB 2; Length 95;
Best Local Similarity 66.7%; Pred. No. 2.85e-04;
Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 75 EVCLDPKKEKWQ 86
|||||
1 EICADPTQKWQ 12

RESULT 11
ENTRY JN0841
TITLE eotaxin precursor - rat
ORGANISM Rattus norvegicus #common_name Norway rat
DATE 21-Feb-1995 #sequence_revision 05-Apr-1995 #text_change
17-Mar-1999
ACCESSIONS JN0841
REFERENCE JN0841
#authors Jose, P.J.; Adcock, I.M.; Griffiths-Johnson, D.A.; Berkman,
N.; Wells, T.N.C.; Williams, T.J.; Power, C.A.
#journal Biochem. Biophys. Res. Commun. (1994) 205:788-794
#title Eotaxin: Cloning of an eosinophil chemoattractant cytokine
and increased mRNA expression in allergen-challenged
guinea-pig lungs.
#cross-references MUID:95091818
#accession JN0841
##molecule_type mRNA
##residues 1-96 ##label JOS
##cross-references EMBL:X77603; NID:g602551; PID:g602552
COMMENT This protein is identified as a potent eosinophil chemoattractant.
CLASSIFICATION #superfamily macrophage inflammatory protein
KEYWORDS glycoprotein
FEATURE
1-23 #domain signal sequence #status predicted #label SIG\
24-96 #product eotaxin #status predicted #label MAT\
93 #binding_site carbohydrate (Thr) (covalent) #status
predicted
SUMMARY #length 96 #molecular-weight 10695 #checksum 7329
Query Match 81.1%; Score 77; DB 2; Length 96;
Best Local Similarity 81.8%; Pred. No. 2.85e-04;
Matches 9; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Db 71 ICADPKKKWQ 81
|||||
2 ICADPTQKWQ 12

RESULT 12
ENTRY JN0899
TITLE eotaxin precursor - guinea pig
ORGANISM Cavia porcellus #common_name guinea pig
DATE 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change
09-May-1997
ACCESSIONS JN0899
REFERENCE JN0899
#authors Rothenberg, M.E.; Luster, A.D.; Lilly, C.M.; Drazen, J.M.;
Leder, P.
#journal J. Exp. Med. (1995) 181:1211-1216
#title Constitutive and allergen-induced expression of eotaxin mRNA
in the guinea pig lung.
#cross-references MUID:95173589
#accession JN0899
#status preliminary; translated from GB/EMBL/DBJ
##molecule_type mRNA
##residues 1-96 ##label RES
##cross-references EMBL:U18941; NID:g687655; PID:g687656
CLASSIFICATION #superfamily macrophage inflammatory protein
SUMMARY #length 96 #molecular-weight 10753 #checksum 7236
Query Match 81.1%; Score 77; DB 2; Length 96;
Best Local Similarity 81.8%; Pred. No. 2.85e-04;
Matches 9; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Db 71 ICADPKKKWQ 81
|||||
2 ICADPTQKWQ 12

RESULT 13
ENTRY JN0897
TITLE interleukin-8 - sheep
ORGANISM Ovis sp. #common_name sheep
DATE 21-Feb-1997 #sequence_revision 21-Feb-1997 #text_change
09-May-1997
ACCESSIONS JN0897
REFERENCE JN0897
#authors Seow, H.F.; Yoshimura, T.; Wood, P.R.; Colditz, I.G.
#journal Immunol. Cell Biol. (1994) 72:398-405
#title Cloning, sequencing, expression and inflammatory activity in
skin of ovine interleukin-8.
#cross-references MUID:95137691
#accession JN0897
##molecule_type mRNA
##residues 1-101 ##label SEO
##cross-references GB:S74436; NID:g786590; PID:g786591
GENETICS
#gene OIL-8
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 101 #molecular-weight 11292 #checksum 294
Query Match 81.1%; Score 77; DB 2; Length 101;
Best Local Similarity 66.7%; Pred. No. 2.85e-04;
Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db 75 EVCLDPKKEKWQ 86
|||||
1 EICADPTQKWQ 12

RESULT 14
ENTRY S42496
TITLE interleukin 8 - sheep
ORGANISM Ovis orientalis aries, Ovis ammon aries
#common_name domestic sheep
DATE 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change
08-Sep-1997
ACCESSIONS S42496
REFERENCE S42496
#authors Legastelois, I.; Greenland, T.; Arnaud, P.; Mornex, J.F.;
Cordier, G.
#submission submitted to the EMBL Data Library, March 1994
#description Nucleotide sequence of ovine interleukin 8 cDNA using
polymerase chain reaction.
#accession S42496
#status preliminary
##molecule_type mRNA
##residues 1-101 ##label LEG
##cross-references EMBL:X78306; NID:g463253; PID:g463254
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 101 #molecular-weight 11292 #checksum 294
Query Match 81.1%; Score 77; DB 2; Length 101;
Best Local Similarity 66.7%; Pred. No. 2.85e-04;
Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

```

```

Db      75  EVCLDPKWKVQ 86
      1  EICADPTQKWKVQ 12

RESULT  15
ENTRY   #type complete
TITLE   interleukin-8 precursor - pig
ORGANISM #formal name Sus scrofa domestica #common_name domestic pig
DATE    02-Jun-1995 #sequence_revision 02-Jun-1995 #text_change
      08-Sep-1997
ACCESSIONS A53096
REFERENCE  A53096
#authors   Lin, G.; Pearson, A.E.; Scamurra, R.W.; Zhou, Y.; Baarsch,
           M.J.; Weiss, D.J.; Murtaugh, M.P.
#journal   J. Biol. Chem. (1994) 269:77-85
#title     Regulation of interleukin-8 expression in porcine alveolar
           macrophages by bacterial lipopolysaccharide.
#cross-references MUID:94103307
#accession  A53096
#status     preliminary
#molecule_type mRNA
#residues   1-103 #label LIN
#cross-references GB:M86923; NID:g164520; PID:g164521
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY       #length 103 #molecular-weight 11633 #checksum 8835

Query Match      81.1%; Score 77; DB 2; Length 103;
Best Local Similarity 66.7%; Pred. No. 2.85e-04;
Matches 8; Conservative 2; Mismatches 2; Indels 0; Gaps 0;

Db      75  EVCLDPKWKVQ 86
      1  EICADPTQKWKVQ 12

Search completed: Fri Feb 4 17:44:58 2000
Job time : 22 secs.

```

[M][A][T][R][I][X] (TM)

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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm
Run on: Fri Feb 4 17:44:01 2000; MasPar time 3.51 Seconds
Tabular output not generated. 72.692 Million cell updates/sec

Title: >US-09-150-813-66
Description: (1-12) from US09150813.pap
Perfect Score: 95
Sequence: 1 EICADPTQKWVQ 12
Scoring table: PAM 150
Gap 15

Searched: 170751 seqs, 21266608 residues
Post-processing: Minimum Match 0%
Listing first 45 summaries
Database: a-geneseq35
1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
14:part14 15:part15 16:part16 17:part17 18:part18
19:part19 20:part20 21:part21 22:part22 23:part23
24:part24 25:part25 26:part26 27:part27 28:part28
29:part29 30:part30 31:part31 32:part32 33:part33
34:part34 35:part35 36:part36 37:part37 38:part38
39:part39
Statistics: Mean 18.261; Variance 66.240; scale 0.276
Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES					Pred. No.	
Result No.	Score	Query Match	Length	ID	Description	
1	95	100.0	67	14	R73915	Human monocyte chemoattractant factor hmCP-3.
2	95	100.0	99	13	R70801	Chemoattractant prote
3	95	100.0	109	2	R24353	Cytokine encoded by c
4	90	94.7	66	24	W13598	Monocyte chemoattract
5	90	94.7	67	24	W13599	Monocyte chemoattract
6	90	94.7	68	24	W13597	Monocyte chemoattract
7	90	94.7	69	14	R87678	des(2-8) MCP-1.
8	90	94.7	69	24	W13596	Monocyte chemoattract
9	90	94.7	76	14	R87677	(3-Ala) MCP-1.
10	90	94.7	76	14	R87680	Monocyte chemotactic
11	90	94.7	76	20	W09374	Monocyte chemotactic
12	90	94.7	76	21	W11131	Mature human monocyte
13	90	94.7	76	30	W40175	Macrophage chemoattra
14	90	94.7	76	1	P90292	Peptide from human g1
15	90	94.7	76	10	R53398	Sense MCP-1.
16	90	94.7	76	14	R87675	(28-Asp) MCP-1.

17	90	94.7	76	5	R28660	MCF.	5.67e-02
18	90	94.7	76	14	R87676	(24-Arg) MCP-1.	5.67e-02
19	90	94.7	77	15	R86859	Mature MCP-1.	5.67e-02
20	90	94.7	99	30	W40174	Macrophage chemoattra	5.67e-02
21	90	94.7	99	14	R73914	Human monocyte chemoa	5.67e-02
22	90	94.7	99	2	P95387	Human monocyte chemo-	5.67e-02
23	90	94.7	99	5	R28663	MCF.	5.67e-02
24	90	94.7	99	13	R70800	Chemoattractant prote	5.67e-02
25	86	90.5	71	26	W22675	Drol13+ chemokine beta	1.43e-01
26	86	90.5	75	31	W56690	Chemokine MCP-4 prote	1.43e-01
27	86	90.5	75	26	W22673	Bac 3 chemokine betal	1.43e-01
28	86	90.5	77	26	W22672	Bac 2 chemokine betal	1.43e-01
29	86	90.5	79	26	W22674	Drol1/2 chemokine bet	1.43e-01
30	86	90.5	82	26	W22671	Bac 1 chemokine betal	1.43e-01
31	86	90.5	82	24	W17665	Stem cell mobilising	1.43e-01
32	86	90.5	98	28	W30191	Monocyte chemotactic	1.43e-01
33	86	90.5	98	31	W56087	Human monocyte chemoa	1.43e-01
34	86	90.5	98	26	W22670	Human chemokine betal	1.43e-01
35	86	90.5	98	17	R93087	Human chemokine beta-	1.43e-01
36	86	90.5	99	2	R06398	Human MCF precursor.	1.43e-01
37	85	89.5	76	5	R26580	Sequence of bovine P6	1.81e-01
38	85	89.5	99	5	R26581	Sequence of P6 precu	1.81e-01
39	82	86.3	82	29	W44721	Amino acid sequence o	3.60e-01
40	82	86.3	97	23	W10099	Human eotaxin.	3.60e-01
41	82	86.3	97	24	W14990	Human eosinocyte CC t	3.60e-01
42	82	86.3	97	21	W00667	Pancreas expressed ch	3.60e-01
43	80	84.2	60	24	W17662	Stem cell mobilising	5.68e-01
44	80	84.2	89	21	W07204	Human cytokine beta-1	5.68e-01
45	80	84.2	89	33	W57698	Human MIP-4 protein.	5.68e-01

ALIGNMENTS

RESULT 1
ID R73915 standard; protein; 67 AA.
AC R73915;
DT 05-DEC-1995 (first entry)
DE Human monocyte chemoattractant factor hmCP-3.
KW Human monocyte chemoattractant factor; hmCP-3; chemokine; vaccine;
KW meningitis related homologous antigenic sequence; MRHAS; RV-1;
KW immunosays; diagnosis; treatment; prophylactic; bacterial;
KW viral.
OS Homo sapiens.
PN W09509232-A.
PD 06-APR-1995.
PF 28-SEP-1994; CA0516.
PR 28-SEP-1993; US-127499.
PA (SHAR/) SHARMA L R.
PI (VALS/) VAN ALSTYNE D.
PI Sharma LR, Van Alstyne D;
DR WPI: 95-147431/19.
PT New peptide(s) and corresp. antibodies for the treatment of
PT meningitis - the peptide(s) corresp. to homologous antigenic
PT sites on bacterial and viral agents and on chemokine(s), used for
PT detecting and preventing meningitis
PS Claim 47: Fig 8/10; 98pp; English.
CC R73915 is the chemokine Human monocyte chemoattractant factor hmCP-3.
CC It contains the meningitis related antigenic sequences (MRHAS) claimed
CC in R73896 and R73908, which are recognised by a monoclonal antibody
CC from the hybridoma Rubella virus (RV)-1. The claimed MRHAS peptides
CC may be used in immunoassays to diagnose the presence of bacterial
CC and/or viral meningitis agents in a sample, or in prophylactic and
CC therapeutic meningitis treatments. The peptides may also be used as
CC vaccines against meningitis.
CC NB: Identified by matching corresponding MRHAS peptides.
SQ Sequence 67 AA;

Query Match 100.0%; Score 95; DB 14; Length 67;
Best Local Similarity 100.0%; Pred. No. 1.76e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Db 41 eicadptqkwvq 52
|||||||

Qy 1 EICADPTQKWVQ 12

RESULT 2
ID R70801 standard; Protein; 99 AA.

DT 29-AUG-1995 (first entry)
DE Chemoattractant protein MCP-3.
KW MCP-3; chemoattractant; heparanase; heparin; heparan sulfate;
arthritis; restenosis; cancer; wound healing.
OS Homo sapiens.
PN W09504158-A.
PD 09-FEB-1995.
PF 26-JUL-1994; U08207.
PR 29-JUL-1993; US-099866.
PR 13-OCT-1993; US-136117.
PA (UPJO) UPJOHN CO.
PI Hoogwerf AJ. Ledbetter SR;
WPI; 95-082239/11.
DR N-PSDB; Q85371.
DR Screening for cpds. with anti-heparanase activity - by detecting
inhibition of heparin or heparan sulphate degradation,
potentially useful for treating arthritis, restenosis, cancer.
PS Claim 13; Page 50; 60pp; English.
CC Purified heparanases, prepared under reducing conditions and
activated with transglutaminase, are given in R70786-801. Most
are prepared by reverse transcription of mRNA from activated human
leukocytes, then cloning of the cDNA into pVL1392 baculovirus
vector, and expression in Sf9 cells in the presence of reduced
glutathione and dithiothreitol.
CC glutathione and dithiothreitol.
SQ Sequence 99 AA;

Query Match 100.0%; Score 95; DB 13; Length 99;
Best Local Similarity 100.0%; Pred. NO. 1.76e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 73 eicadptqkwvq 84
|||||
Qy 1 EICADPTQKWVQ 12

RESULT 3
ID R24353 standard; Protein; 109 AA.

DT 26-NOV-1992 (first entry)
DE Cytokine encoded by clone NC28.
KW Cytokine; plasmid pSE1; HTLV-1; human T-lymphocyte virus;
KW mouse; alpha-globin; E.coli cloning vector; ss.
OS Synthetic.
FH Key Location/Qualifiers
FT peptide 1..33
FT /label= signal
FT /note= "includes 3 potential initiation sites"
FT protein 34..109
FT /label= cytokine
FT modified_site 39..41
FT /label= N-glycosylation
FT /note= "putative"
PN EP-488900-A.
PD 03-JUN-1992.
PF 29-NOV-1991; 403243.
PR 29-NOV-1990; FR-014961.
PA (ERAP) ELF SANOFI.
PA (SNFI) SANOFI SA.
PI Caput D, Ferrara P, Miloux B, Minty A, Vita N;
WPI; 92-185765/23.
DR N-PSDB; Q25259.
PT New monocyte chemoattractive cytokine - for treatment of cancer
and parasitic infections, e.g. leishmaniasis, leprosy or Chagas
disease
PS Claim 1; Fig 2; 45pp; French.
CC This protein is encoded by the NC28 clone isolated from
peripheral blood mononuclear cells stimulated with phorbol

CC 2-myristate-3-acetate (see Q25259). The mature protein is claimed.
CC It can be N-terminally deleted such that the mature protein starts
at Val 3 or at Lys 19. The leader sequence is active in animal
cells. See Q25258-Q25262.
SQ Sequence 109 AA;

Query Match 100.0%; Score 95; DB 2; Length 109;
Best Local Similarity 100.0%; Pred. NO. 1.76e-02;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 83 eicadptqkwvq 94
|||||
Qy 1 EICADPTQKWVQ 12

RESULT 4

ID W13598 standard; peptide; 66 AA.
AC W13598;
DT 07-NOV-1997 (first entry)
DE Monocyte chemoattractant protein analogue MCP-1 (10-76).
KW Truncated monocyte chemoattractant protein-1; inhibitor;
receptor binding; anti inflammatory; basophil; lymphocyte; allergy;
KW chronic inflammatory disease; arthritis; arteriosclerosis;
lung disease.
OS Homo sapiens.
PN CA2152141-A.
PD 20-DEC-1996.
PF 19-JUN-1995; 152141.
PR 19-JUN-1995; CA-152141.
PA (LEWJ/) LEWIS I.
PI Gong J, Lewis I;
WPI; 97-165844/16.
DR N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) -
lacks MCP-1 activity and inhibits receptor binding, useful as
anti-inflammatory agent
PS Disclosure: Page 5; 27pp; English.
CC The present sequence represents an analogue, MCP-1 (10-76), of monocyte
chemoattractant protein-1 (MCP-1). The analogue, which lacks the
N-terminal amino acids 1-9 of MCP-1, acts as an antagonist of MCP-1
as it lacks MCP-1 biological activity and inhibits binding to a MCP-1
receptor. The analogue is useful as an anti-inflammatory agent to block
the effects of MCP-1 which is an inflammatory mediator causing migration
of monocytes and other cells e.g. basophils and lymphocytes into
inflammation sites. MCP-1 has been implicated in allergic and chronic
inflammatory diseases e.g. arthritis, arteriosclerosis and several lung
diseases. The analogue competes more effectively with MCP-1 for binding
MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably
providing 50% inhibition of binding at a 25:1 ratio or less, compared
with 75:1 for prior art mutant 7ND.
SQ Sequence 66 AA;

Query Match 94.7%; Score 90; DB 24; Length 66;
Best Local Similarity 91.7%; Pred. NO. 5.67e-02;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 40 eicadptqkwvq 51
|||||
Qy 1 EICADPTQKWVQ 12

RESULT 5

ID W13599 standard; peptide; 67 AA.
AC W13599;
DT 07-NOV-1997 (first entry)
DE Monocyte chemoattractant protein analogue MCP-1 (11-76).
KW Truncated monocyte chemoattractant protein-1; inhibitor;
receptor binding; anti inflammatory; basophil; lymphocyte; allergy;
KW chronic inflammatory disease; arthritis; arteriosclerosis;
lung disease.
OS Homo sapiens.
PN CA2152141-A.
PD 20-DEC-1996.
PF 19-JUN-1995; 152141.


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PR 19-JUN-1995; CA-152141.
PA (LEWI/) LEWIS I.
PI Gong J, Lewis I;
DR WPI; 97-165844/16.
PT N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) -
PT lacks MCP-1 activity and inhibits receptor binding, useful as
PT anti-inflammatory agent
PT Disclosure; Page 5; 27pp; English.
PS The present sequence represents an analogue, MCP-1 (11-76), of monocyte
CC chemoattractant protein-1 (MCP-1). The analogue, which lacks the
CC N-terminal amino acids 1-10 of MCP-1, acts as an antagonist of MCP-1
CC as it lacks MCP-1 biological activity and inhibits binding to a MCP-1
CC receptor. The analogue is useful as an anti-inflammatory agent to block
CC the effects of MCP-1 which is an inflammatory mediator causing migration
CC of monocytes and other cells e.g. basophils and lymphocytes into
CC inflammation sites. MCP-1 has been implicated in allergic and chronic
CC inflammatory diseases e.g. arthritis, arteriosclerosis and several lung
CC diseases. The analogue competes more effectively with MCP-1 for binding
CC MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably
CC providing 50% inhibition of binding at a 25:1 ratio or less, compared
CC with 75:1 for prior art mutant 7ND.
SQ Sequence 67 AA;

Query Match 94.7%; Score 90; DB 24; Length 67;
Best Local Similarity 91.7%; Pred. No. 5.67e-02;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 41 eicadpkqkwvq 52
      ||||| |||||
QY 1 EICADPTQKWVQ 12

RESULT 6
ID W13597 standard; peptide: 68 AA.
AC W13597;
DE 07-NOV-1997 (first entry)
DE Monocyte chemoattractant protein analogue MCP-1 (9-76).
KW Truncated monocyte chemoattractant protein-1; inhibitor;
KW receptor binding; anti inflammatory; basophil; lymphocyte; allergy;
KW chronic inflammatory disease; arthritis; arteriosclerosis;
KW lung disease.
OS Homo sapiens.
PN CA2152141-A.
PD 20-DEC-1996.
PF 19-JUN-1995; 152141.
PR 19-JUN-1995; CA-152141.
PA (LEWI/) LEWIS I.
PI Gong J, Lewis I;
DR WPI; 97-165844/16.
PT N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) -
PT lacks MCP-1 activity and inhibits receptor binding, useful as
PT anti-inflammatory agent
PS Claim 7; Page 5; 27pp; English.
CC The present sequence represents an analogue, MCP-1 (9-76), of monocyte
CC chemoattractant protein-1 (MCP-1). The analogue, which lacks the
CC N-terminal amino acids 1-8 of MCP-1, acts as an antagonist of MCP-1
CC as it lacks MCP-1 biological activity and inhibits binding to a MCP-1
CC receptor. The analogue is useful as an anti-inflammatory agent to block
CC the effects of MCP-1 which is an inflammatory mediator causing migration
CC of monocytes and other cells e.g. basophils and lymphocytes into
CC inflammation sites. MCP-1 has been implicated in allergic and chronic
CC inflammatory diseases e.g. arthritis, arteriosclerosis and several lung
CC diseases. The analogue competes more effectively with MCP-1 for binding
CC MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably
CC providing 50% inhibition of binding at a 25:1 ratio or less, compared
CC with 75:1 for prior art mutant 7ND.
SQ Sequence 68 AA;

Query Match 94.7%; Score 90; DB 24; Length 68;
Best Local Similarity 91.7%; Pred. No. 5.67e-02;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 42 eicadpkqkwvq 53
      ||||| |||||
QY 1 EICADPTQKWVQ 12

RESULT 7
ID R87678 standard; protein; 69 AA.
AC R87678;
DE 21-FEB-1996 (first entry)
DE des(2-8) MCP-1.
KW monocyte chemoattractant protein; MCP-1; mutant; restenosis;
KW angioplasty.
OS Homo sapiens.
PN W09513295-A1.
PD 18-MAY-1995.
PF 07-NOV-1994; U12874.
PR 12-NOV-1993; US-152301.
PA (DAND ) DANA FARRER CANCER INST INC.
PI Rollins B, Zhang YJ;
DR WPI; 93-215051/28.
PT Human monocyte chemo-attractant protein-1 (MCP-1) derivs. - are
PT capable of inhibiting the monocyte chemo-attractant activity of
PT endogenous MCP-1 and can be used to treat restenosis
PS Claim 4; Page 11; 22pp; English.
CC Monocyte chemoattractant protein-1 (MCP-1) derivatives are mutated such
CC that they inhibit the monocyte chemoattractant activity of endogenous
CC MCP-1, provided that the derivative has not been modified by the
CC substitution of 28-Tyr by Leu and/or 30-Arg by Val. Preferred mutations
CC are: (1) substitution of 28-Tyr by aspartate; (2) substitution of 24 Arg
CC by Phe; (3) substitution of 3-Asp by Ala; and/or (4) deletion of amino
CC acids 2-8. The present sequence is a specifically claimed human MCP-1
CC derivative based on the parent protein disclosed in Rollins, Molecular
CC and Cellular Biology, Vol. 9, No. 11, pp. 4687-4695, Nov. 1989.
CC The peptides can be used to prevent restenosis, e.g. in patients
CC undergoing coronary artery angioplasty.
SQ Sequence 69 AA;

Query Match 94.7%; Score 90; DB 14; Length 69;
Best Local Similarity 91.7%; Pred. No. 5.67e-02;
Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 43 eicadpkqkwvq 54
      ||||| |||||
QY 1 EICADPTQKWVQ 12

RESULT 8
ID W13596 standard; peptide; 69 AA.
AC W13596;
DE 07-NOV-1997 (first entry)
DE Monocyte chemoattractant protein analogue MCP-1 (8-76).
KW Truncated monocyte chemoattractant protein-1; inhibitor;
KW receptor binding; anti inflammatory; basophil; lymphocyte; allergy;
KW chronic inflammatory disease; arthritis; arteriosclerosis;
KW lung disease.
OS Homo sapiens.
PN CA2152141-A.
PD 20-DEC-1996.
PF 19-JUN-1995; 152141.
PR 19-JUN-1995; CA-152141.
PA (LEWI/) LEWIS I.
PI Gong J, Lewis I;
DR WPI; 97-165844/16.
PT N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) -
PT lacks MCP-1 activity and inhibits receptor binding, useful as
PT anti-inflammatory agent
PS Claim 5; Page 5; 27pp; English.
CC The present sequence represents an analogue, MCP-1 (8-76), of monocyte

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CC chemoattractant protein-1 (MCP-1). The analogue, which lacks the
 CC N-terminal amino acids 1-7 of MCP-1, acts as an antagonist of MCP-1
 CC as it lacks MCP-1 biological activity and inhibits binding to a MCP-1
 CC receptor. The analogue is useful as an anti-inflammatory agent to block
 CC the effects of MCP-1 which is an inflammatory mediator causing migration
 CC of monocytes and other cells e.g. basophils and lymphocytes into
 CC inflammatory sites. MCP-1 has been implicated in allergic and chronic
 CC inflammatory diseases e.g. arthritis, arteriosclerosis and several lung
 CC diseases. The analogue competes more effectively with MCP-1 for binding
 CC MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably
 CC providing 50% inhibition of binding at a 25:1 ratio or less, compared
 CC with 75:1 for prior art mutant 7ND.
 SQ Sequence 69 AA;

Query Match 94.7%; Score 90; DB 24; Length 69;
 Best Local Similarity 91.7%; Pred. No. 5.67e-02;

Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 43 eicadpkqkvq 54
 ||||| |||||
 QY 1 EICADPTQKWQ 12

RESULT 9

ID R87677 standard; protein; 76 AA.

AC R87677;

DT 21-FEB-1996 (first entry)

DE (3-Ala) MCP-1.

KW monocyte chemoattractant protein; MCP-1; mutant; restenosis;

KW angioplasty.

OS Homo sapiens.

FH Key

FT modified_site 3

FT Location/Qualifiers

FT disulfide_bond 11..56 /note= "Asp in the native sequence is replaced by Ala"

FT disulfide_bond 12..52

PN W09513295-Al.

PD 18-MAY-1995.

PE 07-NOV-1994; U12874.

PR 12-NOV-1993; US-152301.

PA (DAND) DANA FARBEN CANCER INST INC.

PI Rollins B, Zhang YJ;

DR WPI; 95-215051/28.

PT Human monocyte chemo-attractant protein-1 (MCP-1) derivs. - are

PT capable of inhibiting the monocyte chemo-attractant activity of

PT endogenous MCP-1 and can be used to treat restenosis

PS Claim 6; Page 11; 22pp; English.

CC Monocyte chemoattractant protein-1 (MCP-1) derivatives are mutated such

CC that they inhibit the monocyte chemoattractant activity of endogenous

CC MCP-1, provided that the derivative has not been modified by the

CC substitution of 28-Tyr by Leu and/or 30-Arg by Val. Preferred mutations

CC are: (1) substitution of 28 Tyr by aspartate; (2) substitution of 24 Arg

CC by Phe; (3) substitution of 3-Asp by Ala; and/or (4) deletion of amino

CC acids 2-8. The present sequence is a specifically claimed human MCP-1

CC derivative based on the parent protein disclosed in Rollins, Molecular

CC and Cellular Biology, Vol. 9, No. 11, pp. 4687-4695, Nov. 1989.

CC The peptides can be used to prevent restenosis, e.g. in patients

CC undergoing coronary artery angioplasty.

CC Sequence 76 AA;

SQ

Query Match

Best Local Similarity 94.7%; Score 90; DB 14; Length 76;

Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 50 eicadpkqkvq 61

||||| |||||

QY 1 EICADPTQKWQ 12

RESULT 10

ID R87680 standard; protein; 76 AA.

AC R87680;

DT 05-MAR-1996 (first entry)

DE Monocyte chemotactic activating factor for use as wound remedy.
 KW monocyte chemotactic activating factor; MCAF; wound remedy.
 OS Homo sapiens.

PN W09507710-Al.

PD 23-MAR-1995.

PF 13-SEP-1994; J01512.

PR 13-SEP-1993; JP-227385.

PA (TORA) TORAY IND INC.

PI Matsushima K, Naruto M;

DR WPI; 95-131181/17.

PT Wound treatment using monocyte chemotactic factor - has potent

PT therapeutic effect on skin wounds and ulcers

PS Disclosure: Page 12; 22pp; Japanese.

CC The invention relates to a new remedy for curing wounds which, instead

CC of comprising a growth factor, comprises a monocyte chemotactic

CC activating factor (MCAF) or its variants or derivatives. The factor has

CC potent effect on skin wounds and ulcers. The present sequence is human

CC MCAF, the activity of which is exemplified as the new remedy.

CC Sequence 76 AA;

SQ

Query Match

Best Local Similarity 94.7%; Score 90; DB 14; Length 76;

Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 50 eicadpkqkvq 61

||||| |||||

QY 1 EICADPTQKWQ 12

RESULT 11

ID W09374 standard; Protein; 76 AA.

AC W09374;

DT 21-MAR-1997 (first entry)

DE Monocyte chemotactic protein 1.

KW Human; monocyte chemoattractant protein; antisense; inhibition;

KW mononuclear cell; lymphocyte; macrophage; smooth muscle cell;

KW vascular restenosis.

OS Homo sapiens.

FH Key

FT misc_difference 1

FT Location/Qualifiers

FT misc_difference 51 /note= "encoded by codon CAG"

FT misc_difference 65 /note= "encoded by codon AUG"

FT misc_difference 65 /note= "encoded by codon CAC"

PN US5571713-A.

PD 05-NOV-1996.

PF 22-OCT-1992; 965678.

PR 22-OCT-1992; US-965678.

PA 27-MAY-1994; US-250958.

PI (UNMI) UNIV MICHIGAN.

PI Kunkel SL, Lyle LR, Strieter RM;

DR WPI; 96-505405/50.

DR N-PSDB; T48092.

PT Anti-sense Monocyte Chemotactic Protein-1 oligonucleotide(s) -

PT useful for therapy or diagnosis of restenosis, etc.

PS Disclosure: Column 13-14; 16pp; English.

CC This is the amino acid sequence of the human monocyte chemoattractant

CC protein (MCP)-1, a member of the C-C chemokine family. MCP-1 is a potent

CC stimulator of monocyte chemotaxis and is produced by injured vascular

CC smooth cells thus attracting monocytes and macrophages which infiltrate

CC the injured area and release growth factor. This causes proliferation of

CC the vascular smooth cells resulting in restenosis. The gene sequence can

CC be used to generate antisense sequences e.g. T48093-7, which can be used

CC to inhibit in vitro MCP-1 prodn. by mononuclear cells e.g. lymphocytes or

CC macrophages, or smooth muscle cells, esp. in order to prevent vascular

CC restenosis.

CC Sequence 76 AA;

SQ

Query Match

Best Local Similarity 94.7%; Score 90; DB 20; Length 76;

Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 50 eicadpdkqkvq 61
 ||||| |||||
 QY 1 EICADPTQKWQ 12

RESULT 12

ID W1131 standard; protein; 76 AA.
 AC W1131;
 DE 10-JUN-1997 (first entry)
 DE Mature human monocyte chemoattractant protein-1 (MCP-1).
 KW MCP-1; mature chemoattractant protein-1; cytokine; interleukin-8;
 KW IL-8; neutrophil activating peptide; labelling; imaging; targeting;
 KW radionuclide; infection; inflammation; neoplasm; atheromatous lesion;
 KW restenosis.

OS Homo sapiens.

FH Key Location/Qualifiers

FT misc_difference 1

FT /note= "X= any amino acid"

PN US5605671-A.

PD 25-FEB-1997.

PF 05-OCT-1992; 956862.

PR 05-OCT-1992; US-956863.

PR 05-OCT-1992; US-956862.

PR 29-APR-1994; US-235659.

PA (MLC) MALLINCKRODT MEDICAL INC.

PA (UNMI) UNIV MICHIGAN.

PI Kunkel SL, Lyle LR, Strieter RM;

DR WPI; 97-153541/14.

DR Radio:labelling neutrophil-activating peptide(s) - for imaging

PT Targeted delivery of radioactive agent

PS Example 10: Column 19-20; 15pp; English.

CC W1131 represents mature human monocyte chemoattractant protein-1

CC (MCP-1). MCP-1 was radionuclide labelled and used in a method for

CC imaging a target site in vivo in an animal. Labelled MCP-1 was allowed

CC to accumulate at a target site (having MCP-1 receptors) in the animal

CC and detected so as to image the target site. Any Cys-Cys or Cys-Xaa-Cys

CC chemokine carrying either iodine-123 or iodine-131 can be used in the

CC method. Especially preferred is neutrophil activating peptide-2 (NAP-2)

CC which recognises interleukin-8 receptors and is labelled with

CC technetium-99m, indium-111, copper-62, rhenium-186 or rhenium-188.

CC The method can be used for imaging a site of infection, inflammation,

CC neoplasm, atheromatous lesion or restenosis.

SQ Sequence 76 AA;

Query Match 94.7%; Score 90; DB 21; Length 76;

Best Local Similarity 91.7%; Pred. No. 5.67e-02;

Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 50 eicadpdkqkvq 61

||||| |||||

QY 1 EICADPTQKWQ 12

RESULT 13

ID W40175 standard; Protein; 76 AA.

AC W40175;

DT 01-JUL-1998 (first entry)

DE Macrophage chemoattractant peptide designated GDCF-2.

DE Monocyte chemoattractant peptide; MCP; MCP-1; treatment; neoplasm;

KW infection; human; monocyte receptor; chemotactic response; inflammation;

KW monocyte infiltration.

OS Homo sapiens.

FH Key Location/Qualifiers

FT Modified_site 1

FT /note= "pyroglutamic acid"

PN US5714578-A.

PD 03-FEB-1998.

PF 06-JUN-1995; 466280.

PR 30-MAR-1989; US-330446.

PR 31-JAN-1989; US-304234.

PA (USSH) US DEPT HEALTH & HUMAN SERVICES.

PI Appella E, Leonard EJ, Robinson EA, Yoshimura T;

DR WPI; 98-129909/12.

PT Peptide with chemotactic activity for monocytes - from human
 PT monocytes or glioma cells, useful for treating infections and
 PT neoplasms
 PS Claim 1; Column 27; 21pp; English.
 CC The present sequence represents a monocyte chemoattractant peptide (MCP)
 CC designated GDCF-2. MCPs can be isolated from human glioma cell line
 CC U-105MG (e.g. present sequence) and peripheral blood mononuclear
 CC leukocytes. MCPs are used for the treatment of neoplasms and infections
 CC in humans. Short peptides derived from MCPs can be screened to identify
 CC those that can bind to the monocyte receptor without stimulating a
 CC chemotactic response. These are potentially useful for treating
 CC inflammation associated with monocyte infiltration.
 SQ Sequence 76 AA;

Query Match 94.7%; Score 90; DB 30; Length 76;

Best Local Similarity 91.7%; Pred. No. 5.67e-02;

Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 50 eicadpdkqkvq 61

||||| |||||

QY 1 EICADPTQKWQ 12

RESULT 14

ID P90292 standard; peptide; 76 AA.

AC P90292;

DT 17-JAN-1990 (first entry)

DE Peptide from human glioma cell line U-105MG.

DE Glioma; leucocyte; chemotaxis; neoplasms.

OS Human.

FH Key Location/Qualifiers

FT Modified_site 1

FT /label= OTHER

FT /note= "pyroglutamic acid"

PN US7304234-A.

PD 30-JUL-1989.

PF 31-JAN-1989; 030423.

PR 31-JAN-1989; US-304234.

PA (USSH) US Dept. of Health and Human.

PI Yoshimura T; Robinson E; Appella E.

DR WPI; 89-263501/36.

DR New peptide with specific chemotactic activity for monocytes - isolated

PT from glioma or leucocyte cells, useful for treating infections and

PT neoplasms.

PS Disclosure; page 3; 46pp; English.

CC Peptide is derived from glioma cell line U-105MG (ATCC CRL9932) or from

CC leukocytes and has mol. wt. 8400. Used to treat infections and neoplasms.

SQ Sequence 76 AA;

Query Match 94.7%; Score 90; DB 1; Length 76;

Best Local Similarity 91.7%; Pred. No. 5.67e-02;

Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 50 eicadpdkqkvq 61

||||| |||||

QY 1 EICADPTQKWQ 12

RESULT 15

ID R53398 standard; Protein; 76 AA.

AC R53398;

DT 15-DEC-1994 (first entry)

DE Sense MCP-1.

KW Antisense; RNA; DNA; monocyte chemotactic protein-1; MCP-1;

KW radionuclide; vascular restenosis; alpha; beta; emitting isotope;

KW diagnosis; monocytes; vascular injury.

OS Mammalian.

FH Key Location/Qualifiers

FT misc_difference 1

FT /note= "Unspecified amino acid"

PN WO9409128-A.

PD 28-APR-1994.

PF 20-OCT-1993; U10074.

PR 22-OCT-1992; US-965678.
 PA (MLCW) MALLINCKRODT MEDICAL INC.
 PI Lyle LR:
 DR WPI: 94-151314/18.
 PT Anti-sense monocyte chemotactic protein-1 oligonucleotide(s) and
 peptide(s) - is used for inhibiting, treating or imaging areas of
 PT vascular restenosis or potential restenosis
 PS Disclosure; Page 5: 42pp; English.
 CC The sequences given in R53398-99 represent sense and antisense
 CC monocyte chemotactic protein-1 (MCP-1) respectively. These
 CC oligonucleotides may be labelled with a radionuclide and use
 CC therapeutically for the treatment of vascular restenosis.
 CC Radiolabelled antisense MCP-1 compounds may be constructed using high
 CC energy alpha or beta emitting isotopes rather than the gamma
 CC emitters customarily used for diagnostic purposes. Antisense MCP-1
 CC compounds inactivate MCP-1 or inhibit production of MCP-1 so that
 CC monocytes are not attracted to the area of vascular injury and
 CC proliferation of vascular cells is inhibited.
 SO Sequence 76 AA;

Query Match 94.7%; Score 90; DB 10; Length 76;
 Best Local Similarity 91.7%; Pred. No. 5.67e-02;
 Matches 11; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Db 50 eicadpkqkvvq 61
 ||||| |||||
 QY 1 EICADPTQKVVQ 12

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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

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 Tabular output not generated. 133.995 Million cell updates/sec

Title: >US-09-150-813-68
 Description: (1-12) from US09150813.pep
 Perfect Score: 97
 Sequence: 1 DICADPKKKWQ 12

Scoring table: PAM 150
 Gap 15

Searched: 77977 seqs, 28268293 residues

Post-processing: Minimum Match 0%
 Listing first 45 summaries

Database: swiss-prot37
 I:swissprot

Statistics: Mean 25.627; Variance 32.369; scale 0.792

Pred. No. is the number of results predicted by chance to have a
 score greater than or equal to the score of the result being printed,
 and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description	Pred. No.
1	97	100.0	97	1	EOTA_HUMAN EOTAXIN PRECURSOR (EOS	3.72e-10
2	96	99.0	97	1	EOTA_MOUSE EOTAXIN PRECURSOR (EOS	6.75e-10
3	96	99.0	97	1	EOTA_RAT EOTAXIN PRECURSOR (EOS	6.75e-10
4	91	93.8	96	1	EOTA_CAVPO EOTAXIN PRECURSOR (EOS	1.28e-08
5	89	91.8	99	1	MCPI_HUMAN MONOCYTE CHEMOTACTIC P	4.10e-08
6	89	91.8	101	1	MCPI_CANFA MONOCYTE CHEMOTACTIC P	4.10e-08
7	88	90.7	98	1	MCPI_HUMAN MONOCYTE CHEMOTACTIC P	7.31e-08
8	88	90.7	99	1	MCPI_PIG MONOCYTE CHEMOTACTIC P	7.31e-08
9	88	90.7	99	1	MCPI_BOVIN MONOCYTE CHEMOTACTIC P	7.31e-08
10	86	88.7	89	1	MCPI_HUMAN MONOCYTE CHEMOTACTIC P	7.31e-08
11	86	88.7	148	1	MCPI_MOUSE MONOCYTE CHEMOTACTIC P	2.31e-07
12	84	86.6	99	1	MCPI_BOVIN MONOCYTE CHEMOTACTIC P	7.20e-07
13	84	86.6	125	1	MCPI_RABIT MONOCYTE CHEMOTACTIC P	7.20e-07
14	82	84.5	99	1	MCPI_HUMAN MONOCYTE CHEMOTACTIC P	2.22e-06
15	82	84.5	148	1	MCPI_RAT MONOCYTE CHEMOTACTIC P	2.22e-06
16	81	83.5	74	1	MCPI_BOVIN MONOCYTE CHEMOTACTIC P	3.89e-06
17	81	83.5	104	1	MCPI_MOUSE MONOCYTE CHEMOTACTIC P	3.89e-06
18	80	82.5	99	1	MCPI_PIG MONOCYTE CHEMOTACTIC P	6.80e-06
19	80	82.5	101	1	IL8_CAVPO INTERLEUKIN-8 PRECURSOR	6.80e-06
20	80	82.5	120	1	MCPI_CAVPO MONOCYTE CHEMOTACTIC P	6.80e-06
21	79	81.4	91	1	SISD_MOUSE T-CELL SPECIFIC RANTES	1.18e-05
22	79	81.4	92	1	SISD_RAT T-CELL SPECIFIC RANTES	1.18e-05
23	79	81.4	101	1	IL8_CANFA INTERLEUKIN-8 PRECURSOR	1.18e-05

RESULT 1

ID	EOTA_HUMAN	STANDARD:	PRT;	97 AA.
AC	P51671; P50877; Q92490; Q92491;			
DT	01-OCT-1996 (REL. 34, CREATED)			
DT	01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)			
DT	15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)			
DE	EOTAXIN PRECURSOR (EOSINOPHIL CHEMOTACTIC PROTEIN).			
GN	SCY11.			
OS	HOMO SAPIENS (HUMAN)			
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;			
OC	PRIMATES; CATARRHINI; HOMINIDAE; HOMO.			
RN	[1]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE; 96181758.			
RX	GARCIA-ZEPEDA E.A., ROTHENBERG M.E., OWNBEY T.R., LEDER P.,			
RA	LUSTER A.D.;			
RT	"Human eotaxin is a specific chemoattractant for eosinophil cells and			
RT	provides a new mechanism to explain tissue eosinophilia.";			
RL	NAT. MED. 2:449-456(1996).			
RN	[2]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE; 96189937.			
RA	PONATH P.D., QIN S., RINGLER D.J., CLARK-LEWIS I., WANG J., KASSAM N.,			
RA	SMITH H., SHI X., GONZALO J.A., NEWMAN W., GUTIERREZ-RAMOS J.C.,			
RA	MACRAY C.R.;			
RT	"Cloning of the human eosinophil chemoattractant, eotaxin.			
RT	Expression, receptor binding, and functional properties suggest a			
RT	mechanism for the selective recruitment of eosinophils.";			
RL	J. CLIN. INVEST. 97:604-612(1996).			
RN	[3]			
RP	SEQUENCE FROM N.A.			
RC	TISSUE-SMALL INTESTINE;			
RX	MEDLINE; 96205964.			
RA	KITaura M., NAKAJIMA T., IMAI T., HARADA S., COMBADIERE C.,			
RA	TIFFANY H.L., MURPHY P.M., YOSHIE O.;			
RT	"Molecular cloning of human eotaxin, an eosinophil-selective CC			
RT	chemokine, and identification of a specific eosinophil eotaxin			
RT	receptor, CC chemokine receptor 3.";			
RL	J. BIOL. CHEM. 271:7725-7730(1996).			
RN	[4]			
RP	SEQUENCE FROM N.A., SEQUENCE OF 60-65 AND 75-88, AND VARIANTS.			
RC	TISSUE=FORESKIN;			
RX	MEDLINE; 96374440.			
RA	BARTELS J., SCHLUETER C., RICHTER E., NOSO N., KULKE R.,			
RA	CHRISTOPHERS E., SCHROEDER J.M.;			
RT	"Human dermal fibroblasts express eotaxin: molecular cloning, mRNA			
RT	expression, and identification of eotaxin sequence variants.";			

ALIGNMENTS

24	79	81.4	101	1	IL8_SHEEP	INTERLEUKIN-8 PRECURSOR	1.18e-05
25	79	81.4	103	1	IL8_PIG	INTERLEUKIN-8 PRECURSOR	1.18e-05
26	77	79.4	92	1	MILA_RAT	MACROPHAGE INFLAMMATOR	3.55e-05
27	77	79.4	99	1	MCP2_HUMAN	MONOCYTE CHEMOTACTIC P	3.55e-05
28	76	78.4	101	1	IL8_RABIT	INTERLEUKIN-8 PRECURSOR	6.13e-05
29	76	78.4	101	1	IL8_BOVIN	INTERLEUKIN-8 PRECURSOR	6.13e-05
30	73	75.3	50	1	SISD_PIG	T-CELL SPECIFIC RANTES	3.09e-04
31	73	75.3	91	1	SISD_CAVPO	T-CELL SPECIFIC RANTES	3.09e-04
32	73	75.3	91	1	SISD_HUMAN	T-CELL SPECIFIC RANTES	3.09e-04
33	71	73.2	89	1	SDF1_MOUSE	STROMAL CELL-DERIVED F	8.92e-04
34	71	73.2	93	1	SDF1_HUMAN	STROMAL CELL-DERIVED F	8.92e-04
35	71	73.2	93	1	SDF1_FELCA	STROMAL CELL-DERIVED F	8.92e-04
36	70	72.2	92	1	MILA_MOUSE	MACROPHAGE INFLAMMATOR	1.51e-03
37	70	72.2	99	1	IL8_HUMAN	INTERLEUKIN-8 PRECURSOR	1.51e-03
38	69	71.1	90	1	MILB_CHICK	MACROPHAGE INFLAMMATOR	2.54e-03
39	68	70.1	93	1	CCC1_HUMAN	CHEMOKINE CC-1 PRECURS	4.26e-03
40	68	70.1	109	1	CCC3_HUMAN	CHEMOKINE CC-3 PRECURS	4.26e-03
41	67	69.1	197	1	MCP3_MOUSE	MONOCYTE CHEMOTACTIC P	7.12e-03
42	67	69.1	114	1	LTN_RAT	LYMPHOTACTIN PRECURSOR	7.12e-03
43	66	68.0	92	1	MILB_HUMAN	MACROPHAGE INFLAMMATOR	1.19e-02
44	66	68.0	93	1	MIL0_HUMAN	TONSILLAR LYMPHOCYTE L	1.19e-02
45	66	68.0	114	1	LTN_MOUSE	LYMPHOTACTIN PRECURSOR	1.19e-02

RL BIOCHEM. BIOPHYS. RES. COMMUN. 225:1045-1051(1996).
RN [5]
RP SEQUENCE FROM N.A.
RX TISSUE-PLACENTA;
RC MEDLINE; 97312708.
RA GARCIA-ZEPEDA E.A., ROTHENBERG M.E., WEREMOWICZ S., SARAFI M.N.,
RA MORTON C.C., LUSTER A.D.;
RT "Genomic organization, complete sequence, and chromosomal location of
RT the gene for human eotaxin (SCY11), an eosinophil-specific CC
FT chemokine.";
RL GENOMICS 41:471-476(1997).
RN [6]
RP SEQUENCE FROM N.A.
RC TISSUE=LUNG;
RX MEDLINE; 97445071.
RA HEIN H., SCHLUETER C., KULKE R., CHRISTOPHERS E., SCHROEDER J.M.,
RA BARTELS J.;
RT "Genomic organization, sequence, and transcriptional regulation of
RT the human eotaxin gene.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 237:537-542(1997).
RN [7]
RP STRUCTURE BY NMR.
RX MEDLINE; 98380469.
RA CRUMP M.P., RAJARATHNAM K., KIM K.S., CLARK-LEWIS I., SYKES B.D.;
RT "Solution structure of eotaxin, a chemokine that selectively recruits
RT eosinophils in allergic inflammation.";
RL BIOCHEMISTRY 37:11670-11678(1998).
CC -!- FUNCTION: IN RESPONSE TO THE PRESENCE OF ALLERGENS, THIS PROTEIN
CC DIRECTLY PROMOTES THE ACCUMULATION OF EOSINOPHILS, A PROMINENT
CC FEATURE OF ALLERGIC INFLAMMATORY REACTIONS.
CC -!- SUBCELLULAR LOCATION: EXTRACELLULAR.
CC -!- PTM: O-GLYCOSYLATED (PROBABLE).
CC -!- INDUCTION: BY TNF-ALPHA, IL-1-ALPHA AND INTERFERON GAMMA.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC
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CC
CC EMBL; U46573; GI280141; -
DR EMBL; U34780; GI185440; -
DR EMBL; D49372; G1552241; -
DR EMBL; D69291; E221070; -
DR EMBL; 275568; E251275; -
DR EMBL; 275569; E251258; -
DR EMBL; U46572; G2088509; -
DR EMBL; Z92709; E329504; -
DR MIM; 601156; -
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; i18; 1.
DR PDB; 2E0T; 11-NOV-98.
DR EOSINOPHIL; CYTOKINE; CHEMOTAXIS; GLYCOPROTEIN; SIGNAL;
KW INFLAMMATORY RESPONSE; POLYMORPHISM; 3D-STRUCTURE.
FT SIGNAL 1 23
FT CHAIN 24 97
FT DISULFID 32 57
FT DISULFID 33 73
FT VARIANT 7 7
FT VARIANT 23 23
FT VARIANT 51 51
FT VARIANT 79 79
FT SEQUENCE 97 AA; 10732 MW; 6C0F3D98 CRC32;
SQ
Query Match 100.0%; Score 97; DB 1; Length 97;
Best Local Similarity 100.0%; Pred. No. 3.72e-10;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 71 DICADPKKKVQ 82

QY 1 DICADPKKKVQ 12
|||||||
RESULT 2
ID EOTA_MOUSE STANDARD; PRT; 97 AA.
AC P48298; 1996 (REL. 33, CREATED)
DT 01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)
DT 01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE EOTAXIN PRECURSOR (EOSINOPHIL CHEMOTACTIC PROTEIN).
GN SCY11.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=LUNG;
RX MEDLINE; 96004658.
RA ROTHENBERG M.E., LUSTER A.D., LEDER P.;
RT "Murine eotaxin: an eosinophil chemoattractant inducible in
RT endothelial cells and in interleukin 4-induced tumor suppression.";
RL PROC. NATL. ACAD. SCI. U.S.A. 92:8960-8964(1995).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6J; TISSUE=LUNG;
RX MEDLINE; 96158746.
RA GONZALO J.-A., JIA G.-Q., AGUIRRE V., FRIEND D., COYLE A.J.,
RA JENKINS N.A., LIN G.-S., KATZ H., LICHTMAN A., COPELAND N.G., KOPF M.,
RA GUTIERREZ-RAMOS J.-C.;
RT "Mouse eotaxin expression parallels eosinophil accumulation during
RT lung allergic inflammation but it is not restricted to a Th2-type
RT response.";
RL IMMUNITY 4:1-14(1996).
CC -!- FUNCTION: IN RESPONSE TO THE PRESENCE OF ALLERGENS, THIS PROTEIN
CC DIRECTLY PROMOTES THE ACCUMULATION OF EOSINOPHILS (A PROMINENT
CC FEATURE OF ALLERGIC INFLAMMATORY REACTIONS), BUT NOT
CC LYMPHOCYTES, MACROPHAGES OR NEUTROPHILS.
CC -!- SUBCELLULAR LOCATION: EXTRACELLULAR.
CC -!- TISSUE SPECIFICITY: EXPRESSED CONSTITUTIVELY IN THE THYMUS.
CC EXPRESSION INDUCIBLE IN THE LUNG (TYPE I ALVEOLAR EPITHELIAL
CC CELLS), INTESTINE, HEART, SPLEEN, KIDNEY.
CC -!- INDUCTION: BY INTERFERON-GAMMA AND LIPOPOLYSACCHARIDE (LPS).
CC -!- PTM: O-GLYCOSYLATED (PROBABLE).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
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CC
CC EMBL; U26426; G95911; -
DR EMBL; U40672; GI113937; -
DR MGD; MGI:103576; SCY11.
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; i18; 1.
DR HSSP; P80098; 1NCV.
DR EOSINOPHIL; CYTOKINE; CHEMOTAXIS; GLYCOPROTEIN; SIGNAL;
KW INFLAMMATORY RESPONSE.
FT SIGNAL 1 23
FT CHAIN 24 97
FT DISULFID 32 57
FT DISULFID 33 73
FT SEQUENCE 97 AA; 10893 MW; F85A96BC CRC32;
SQ
Query Match 99.0%; Score 96; DB 1; Length 97;
Best Local Similarity 91.7%; Pred. No. 6.75e-10;
Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 71 EICADPKKKWQ 82
:|||||
QY 1 DICADPKKKWQ 12

RESULT 3
ID EOTA_RAT STANDARD; PRT; 97 AA.
AC P97545; 008780;
DT 15-JUL-1998 (REL. 36, CREATED)
DT 15-JUL-1998 (REL. 36, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE EOTAXIN PRECURSOR (EOSINOPHIL CHEMOTACTIC PROTEIN).
OS RATTUS NORVEGICUS (RAT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
RN [1]
RP SEQUENCE FROM N.A.
RA WILLIAMS C.M., NEWTON D.J., WILSON S.A., COLEMAN J.C.,
RA FLANAGAN B.F.;
RL SUBMITTED (DEC-1996) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=LUNG;
RA ISHII Y.;
RL SUBMITTED (MAY-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -!- FUNCTION: IN RESPONSE TO THE PRESENCE OF ALLERGENS, THIS PROTEIN
CC DIRECTLY PROMOTES THE ACCUMULATION OF EOSINOPHILS, A PROMINENT
CC FEATURE OF ALLERGIC INFLAMMATORY REACTIONS (BY SIMILARITY).
CC -!- SUBCELLULAR LOCATION: EXTRACELLULAR.
CC -!- PTM: O-GLYCOSYLATED (PROBABLE).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC
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CC
CC EMBL: Y08358; E274141; -
CC EMBL: U96637; G2098785; -
CC PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
CC PFAM: PF00048; i18; 1.
CC HSP: P80098; INCV.
CC EOSINOPHIL; CYTOKINE; CHEMOTAXIS; GLYCOPROTEIN; SIGNAL;
CC INFLAMMATORY RESPONSE.
FT SIGNAL 1 23
FT CHAIN 24 97
FT DISULFID 32 57
FT DISULFID 33 73
FT CARBOHYD 94 94
FT CONFLICT 3 3
FT CONFLICT L -> S (IN REF. 2).
SQ SEQUENCE 97 AA; 10851 MW; 05B4ED45 CRC32;

Query Match 99.0%; Score 96; DB 1; Length 97;
Best Local Similarity 91.7%; Pred. No. 6.75e-10;
Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 71 EICADPKKKWQ 82
:|||||
QY 1 DICADPKKKWQ 12

RESULT 4
ID EOTA_CAVPO STANDARD; PRT; 96 AA.
AC P80325;
DT 01-JUN-1994 (REL. 29, CREATED)
DT 01-OCT-1995 (REL. 34, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE EOTAXIN PRECURSOR (EOSINOPHIL CHEMOTACTIC PROTEIN).
GN SCY11.

OS CAVIA PORCELLUS (GUINEA PIG).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; HYSTRICOGNATHI; CAVIIDAE; CAVIA.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=LUNG;
RA MEDLINE; 95173589.
RA ROTHENBERG M.E., LUSTER A.D., LILLY C.M., DRAZEN J.M., LEDER P.;
RT "Constitutive and allergen-induced expression of eotaxin mRNA in the
RT guinea pig lung."
RL J. EXP. MED. 181:1211-1216(1995).
RN [2]
RP SEQUENCE FROM N.A.
RA MEDLINE; 95091818.
RA JOSE P.J., ADCOCK I.M., GRIFFITHS-JOHNSON D.A., BERKMAN N.,
RA WELLS T.C., WILLIAMS T.J., POWER C.A.;
RT "Eotaxin: cloning of an eosinophil chemoattractant cytokine and
RT increased mRNA expression in allergen-challenged guinea-pig lungs."
RL BIOCHEM. BIOPHYS. RES. COMMUN. 205:788-794(1994).
RN [3]
RP SEQUENCE OF 24-96.
RC STRAIN=HARTLEY; TISSUE=LUNG;
RA MEDLINE; 94157409.
RA JOSE P.J., GRIFFITHS-JOHNSON D.A., COLLINS P.D., WALSH D.T.,
RA MOBEL R., TOTTY N.F., TRUONG O., HSUAN J.J., WILLIAMS T.J.;
RT "Eotaxin: a potent eosinophil chemoattractant cytokine detected in a
RT guinea pig model of allergic airways inflammation."
RL J. EXP. MED. 179:881-887(1994).
CC -!- FUNCTION: IN RESPONSE TO THE PRESENCE OF ALLERGENS, THIS PROTEIN
CC DIRECTLY PROMOTES THE ACCUMULATION OF EOSINOPHILS, A PROMINENT
CC FEATURE OF ALLERGIC INFLAMMATORY REACTIONS.
CC -!- SUBCELLULAR LOCATION: EXTRACELLULAR.
CC -!- TISSUE SPECIFICITY: LUNG.
CC -!- PTM: O-GLYCOSYLATED (PROBABLE).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
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CC
CC EMBL: U18941; G687656; -
CC EMBL: X77603; G602552; -
CC PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
CC PFAM: PF00048; i18; 1.
CC HSP: P13500; IMCA.
CC EOSINOPHIL; CYTOKINE; CHEMOTAXIS; GLYCOPROTEIN; SIGNAL;
CC INFLAMMATORY RESPONSE.
FT SIGNAL 1 23
FT CHAIN 24 96
FT DISULFID 31 56
FT DISULFID 32 72
FT CARBOHYD 93 93
FT CONFLICT 88 88
FT CONFLICT D -> G (IN REF. 2).
SQ SEQUENCE 96 AA; 10753 MW; DD28C7E5 CRC32;

Query Match 93.8%; Score 91; DB 1; Length 96;
Best Local Similarity 100.0%; Pred. No. 1.28e-08;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 71 ICADPKKKWQ 81
:|||||
QY 2 ICADPKKKWQ 12

RESULT 5
ID MCPL_HUMAN STANDARD; PRT; 99 AA.
AC P13500;
DT 01-JAN-1990 (REL. 13, CREATED)

DR EMBL: M30816; G386961; JOINED.
 DR EMBL: M31625; G386961; JOINED.
 DR EMBL: M24545; G307163; -
 DR EMBL: M28226; G338009; -
 DR EMBL: X14768; G34514; -
 DR EMBL: M37719; G487124; -
 DR EMBL: M28225; G338007; -
 DR EMBL: M28223; G338007; JOINED.
 DR EMBL: M28224; G338007; JOINED.
 DR EMBL: M69738; G545465; -
 DR EMBL: S71513; G240868; -
 DR EMBL: A17786; G641145; -
 DR PIR: A35474; A35474;
 DR PIR: S03339; S03339;
 DR PDB: 1DOK; 12-MAR-97.
 DR PDB: 1DOL; 12-MAR-97.
 DR PDB: 1DOM; 14-OCT-96.
 DR PDB: 1DON; 14-OCT-96.
 DR PDB: 1MCA; 15-OCT-94.
 DR TIM: 158105; -
 DR PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM: PF00048; il8; 1.
 KW CYTOKINE: CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE; 3D-STRUCTURE.
 FT SIGNAL 1 23
 FT CHAIN 24 99 MONOCYTE CHEMOTACTIC PROTEIN 1.
 FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID.
 FT DISULFID 34 59
 FT CARBOHYD 37 75
 FT VARIANT 76 76
 FT MUTAGEN 24 24 A -> T.
 FT MUTAGEN 25 32 MISSING: LOSS OF ACTIVITY.
 FT MUTAGEN 24 85 MISSING: LOSS OF ACTIVITY.
 FT MUTAGEN 26 26 MISSING: 90% REDUCTION IN ACTIVITY.
 FT MUTAGEN 29 29 MISSING: 83% REDUCTION IN ACTIVITY.
 FT MUTAGEN 47 47 D->A: 90% REDUCTION IN ACTIVITY.
 FT MUTAGEN 50 50 N->A: 50% REDUCTION IN ACTIVITY.
 FT MUTAGEN 51 51 R->F: 95% REDUCTION IN ACTIVITY.
 FT MUTAGEN 51 51 S->Q: 40% REDUCTION IN ACTIVITY.
 FT MUTAGEN 53 53 Y->D: LOSS OF ACTIVITY.
 FT MUTAGEN 53 53 R->L: LOSS OF ACTIVITY.
 FT MUTAGEN 91 91 D->L: 90% REDUCTION IN ACTIVITY.
 SQ SEQUENCE 99 AA; 11025 MW; 5355B695 CRC32;
 Query Match 91.8%; Score 89; DB 1; Length 99;
 Best Local Similarity 83.3%; Pred. No. 4.10e-08;
 Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
 Db 73 EICADPKKWKVQ 84
 QY 1 DICADPKKWKVQ 12
 RESULT 6
 ID MCP1_CANFA STANDARD; PRT; 101 AA.
 AC P52203;
 DT 01-OCT-1996 (REL. 34, CREATED)
 DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1) (MONOCYTE
 DE CHEMOATTRACTANT PROTEIN-1).
 GN SCYA2 OR MCP1
 OS CANIS FAMILIARIS (DOG).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC CARNIVORA; FISSIPEDIA; CANIDAE; CANIS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=JUGULAR VEIN ENDOTHELIAL;
 RX MEDLINE: 97176620.
 RA KUMAR A.G., BALLANTYNE C.M., MICHAEL L.H., KUKIELKA G.L., YOKER K.A.,
 RA LINDSEY M.L., HAWKINS H.K., BIRDSALL H.H., MACKAY C.R., LAROSA G.J.,
 RA ROSSEN R.D., SMITH C.W., ENTMAN M.L.;
 RT "Induction of monocyte chemoattractant protein-1 in the small veins
 RT of the ischemic and reperfused canine myocardium.";

RL CIRCULATION 95:693-700(1997).
 CC -1- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
 CC NEUTROPHILS. IMPORTANT FACTOR IN THE COURSE OF THE INFLAMMATORY
 CC REACTION TO REPERFUSION OF THE PREVIOUSLY ISCHEMIC MYOCARDIUM.
 CC MAY PLAY A SIGNIFICANT ROLE IN MONOCYTE TRAFFICKING INTO THE
 CC REPERFUSED MYOCARDIUM.
 CC -1- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
 CC -1- INDUCTION: BY TNF-ALPHA.
 CC -1- TISSUE SPECIFICITY: ENDOTHELIUM OF SMALL VEINS AND INTRAFASCICULAR
 CC VEINS, AND INFILTRATING LEUKOCYTES.
 CC -1- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
 CC C-C) (CHEMOKINE CC).
 CC -----
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 CC or send an email to license@isb-sib.ch).
 CC -----
 DR EMBL: U29653; G1144186; -
 DR PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
 DR PFAM: PF00048; il8; 1.
 DR HSP: P13500; IDON.
 KW CYTOKINE: CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE.
 FT SIGNAL 1 23 BY SIMILARITY.
 FT CHAIN 24 101 MONOCYTE CHEMOTACTIC PROTEIN 1.
 FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
 FT SIMILARITY).
 FT DISULFID 34 59 BY SIMILARITY.
 FT DISULFID 35 75 BY SIMILARITY.
 SQ SEQUENCE 101 AA; 11121 MW; A7075B14 CRC32;
 Query Match 91.8%; Score 89; DB 1; Length 101;
 Best Local Similarity 83.3%; Pred. No. 4.10e-08;
 Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
 Db 73 EICADPKKWKVQ 84
 QY 1 DICADPKKWKVQ 12
 RESULT 7
 ID MCP4_HUMAN STANDARD; PRT; 98 AA.
 AC Q99616;
 DT 15-JUL-1998 (REL. 36, CREATED)
 DT 15-JUL-1998 (REL. 36, LAST SEQUENCE UPDATE)
 DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
 DE MONOCYTE CHEMOTACTIC PROTEIN 4 PRECURSOR (MCP-4) (MONOCYTE
 DE CHEMOATTRACTANT PROTEIN 4) (CK-BETA10) (NCC-1).
 GN SCYA13 OR MCP4 OR NCC1.
 OS HOMO SAPIENS (HUMAN).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=HEART;
 RX MEDLINE: 97113354.
 RA GARCIA-ZEPEDA E.A., COMBADIERE C., ROTHENBERG M.E., SARAFI M.N.,
 RA LAVIGNE F., HAMID Q., MURPHY P.M., LUSTER A.D.;
 RT "Human monocyte chemoattractant protein (MCP)-4 is a novel CC
 RT chemokine with activities on monocytes, eosinophils, and basophils
 RT induced in allergic and nonallergic inflammation that signals through
 RT the CC chemokine receptors (CCR)-2 and -3.";
 RL J. IMMUNOL. 157:5613-5626(1996).
 RN [2]
 RP SEQUENCE FROM N.A., AND SEQUENCE OF 17-98.
 RC TISSUE=FETAL;
 RX MEDLINE: 96235049.
 RA GUCCIONI M., LOETSCHER P., FORSSMANN U., DEWALD B., LI H., LIMA S.H.,
 RA LI Y., KREIDER B., GAROTTA G., THELEN M., BAGGIOLINI M.;
 RT "Monocyte chemotactic protein 4 (MCP-4), a novel structural and

functional analogue of MCP-3 and eotaxin.";
[3] J. EXP. MED. 183:2379-2384(1996).

RP SEQUENCE FROM N.A., AND SEQUENCE OF 22-33.

RC TISSUE=FETAL;

RX MEDLINE; 97341179.

RA BERKHOUT T.A., SARAU H.M., MOORES K., WHITE J.R., ELSHOUBAGY N.,
RA APPELBAUM E., REAPE T.J., BRANWEN M., MAKWANA J., FOLEY J.J.,
RA SCHMIDT D.B., IMBURGIA C., MACNULTY D., MATTHEWS J., O'DONNELL K.,
RA O'SHANNESSEY D., SCOTT M., GROOT P.H.E., MACPHEE C.;

RT "Cloning, in vitro expression, and functional characterization of a
RT novel human CC chemokine of the monocyte chemotactic protein (MCP)
RT family (MCP-4) that binds and signals through the CC chemokine
RT receptor 2B.";

RL J. BIOL. CHEM. 272:16404-16413(1997).

RN [4]

RP SEQUENCE FROM N.A.

RA DANTE M., GIBSON A.;

RL SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

RN [5]

RP SEQUENCE FROM N.A.

RC TISSUE=LUNG;

RA POWER C.A., RISON S.C.G., GUYE-COULIN F., WELLS T.N.C.;

RL SUBMITTED (DEC-1997) TO EMBL/GENBANK/DBJ DATA BANKS.

CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, LYMPHOCYTES,
CC BASOPHILS AND EOSINOPHILS. PLAYS A ROLE IN THE ACCUMULATION OF
CC CCR2B AND CCR3 RECEPTORS. MAY BE INVOLVED IN THE RECRUITMENT OF
CC LEUKOCYTES AT BOTH SIDES OF ALLERGIC AND NONALLERGIC INFLAMMATION.
CC MAY BE INVOLVED IN THE RECRUITMENT OF MONOCYTES INTO THE ARTERIAL
CC WALL DURING THE DISEASE PROCESS OF ARTEROSCLEROSIS. MAY PLAY A
CC ROLE IN THE MONOCYTE ATTRACTION IN TISSUES CHRONICALLY EXPOSED TO
CC EXOGENOUS PATHOGENS.

CC -!- MASS SPECTROMETRY: MW=9314; MW_ERR=30; METHOD=MALDI; RANGE=17-98.

CC -!- MASS SPECTROMETRY: MW=8760; MW_ERR=30; METHOD=MALDI; RANGE=22-98.

CC -!- MASS SPECTROMETRY: MW=8575; MW_ERR=30; METHOD=MALDI; RANGE=24-98.

CC -!- INDUCTION: BY INTERLEUKIN-1 AND TNF-ALPHA.

CC -!- TISSUE SPECIFICITY: WIDELY EXPRESSED. FOUND IN SMALL INTESTINE,

CC THYMUS, COLON, LUNG, TRACHEA, STOMACH AND LYMPH NODE. LOW LEVELS

CC SEEN IN THE PULMONARY ARTERY SMOOTH MUSCLE CELLS.

CC -!- THIS PROTEIN CAN BIND HEPARIN.

CC -!- PTM: ONE MAJOR ISOFORM MCP-4, AND TWO MINOR ISOFORMS (LA)MCP-4 AND

CC (FNPQGLA)MCP-4 ARE PRODUCED BY DIFFERENTIAL SIGNAL CLEAVAGE.

CC (LA)MCP-4 IS ABOUT 30 FOLD LESS ACTIVE THAN MCP-4.

CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE

CC C-C) (CHEMOKINE CC).

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CC EMBL; U46767; G1732123; -.

DR EMBL; AC002482; G2340091; -.

DR EMBL; X93836; E248571; -.

DR MIM; 601391; -.

DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.

DR PFAM; PF00048; i18; 1.

DR HSSP; P13500; 1DOL.

KW CYTOKINE; CHEMOTAXIS; SIGNAL; GLYCOPROTEIN; INFLAMMATORY RESPONSE.

FT SIGNAL 1 23

FT CHAIN 24 98 MONOCYTE CHEMOTACTIC PROTEIN 4.

FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID.

FT DISULFID 34 58 BY SIMILARITY.

FT DISULFID 35 74 BY SIMILARITY.

FT CARBOHYD 29 29 POTENTIAL.

FT SEQUENCE 98 AA; 10986 MW; DF52F6EC CRC32;

Query Match

Best Local Similarity 80.7%; Score 88; DB 1; Length 98;

Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 72 EICADPKKKWQV 83

QY :||||| |||

1 DICADPKKKWQV 12

RESULT 8

ID MCP1_PIG STANDARD; PRT; 99 AA.

AC P42831;

DT 01-NOV-1995 (REL. 32, CREATED)

DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)

DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)

DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1).

GN SCY42.

OS SUS SCROFA (PIG).

OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;

CC ARTIODACTYLA; SUIFORMES; SUINA; SUIDAE; SUS.

RN [1]

RP SEQUENCE FROM N.A.

RX MEDLINE; 94183284.

RA HOSANG K., KNOKE I., KLAUDINY J., WEMPE F., WUTTKE W., SCHEIT K.H.;

RT "Porcine luteal cells express monocyte chemoattractant protein-1

RT (MCP-1): analysis by polymerase chain reaction and cDNA cloning.";

RL BIOCHEM. BIOPHYS. RES. COMMUN. 199:962-968(1994).

RN [2]

RP SEQUENCE FROM N.A.

RC TISSUE=BRAIN;

RA ZACH O.R.F.;

RL SUBMITTED (JUL-1994) TO EMBL/GENBANK/DBJ DATA BANKS.

CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT

CC NEUTROPHILS.

CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).

CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE

CC C-C) (CHEMOKINE CC).

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CC EMBL; X79416; G872313; -.

DR EMBL; X79416; G872313; -.

DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.

DR PFAM; PF00048; i18; 1.

DR HSSP; P13500; 1DON.

KW CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE.

FT SIGNAL 1 23

FT CHAIN 24 99 BY SIMILARITY.

FT MOD_RES 24 24 MONOCYTE CHEMOTACTIC PROTEIN 1.

FT DISULFID 34 59 PYRROLIDONE CARBOXYLIC ACID (BY

FT DISULFID 35 75 BY SIMILARITY).

FT SEQUENCE 99 AA; 10976 MW; ECC3AFB4 CRC32;

Query Match

Best Local Similarity 90.7%; Score 88; DB 1; Length 99;

Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 73 EICAEPKKKWQV 84

QY :||||| |||

1 DICADPKKKWQV 12

RESULT 9

ID MCP2_BOVIN STANDARD; PRT; 99 AA.

AC Q09141.

DT 01-NOV-1995 (REL. 32, CREATED)

DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)

DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)

DE MONOCYTE CHEMOTACTIC PROTEIN 2 PRECURSOR (MCP-2) (MONOCYTE

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DE GN CHEMOATTRACTANT PROTEIN 2).
OS SCYA8 OR MCP2.
OC BOS TAURUS (BOVINE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC ARTIODACTYLA; RUMINANTIA; PECORA; BOVIDAE; BOVINAE; BOS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 94114084.
RA WENPE F., HANES J., SCHEIT K.H.;
RT "Cloning of the gene for bovine monocyte chemoattractant protein-2.";
RL DNA CELL BIOL. 13:1-8(1994).
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES. THIS PROTEIN
CC CAN BIND HEPARIN.
CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC -----
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CC -----
DR EMBL; S67954; E118856; -
DR EMBL; S67956; G544997; -
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; i18; 1.
DR HSP; P80098; INCV.
KW CYTOKINE; CHEMOTAXIS; SIGNAL; HEPARIN-BINDING; INFLAMMATORY RESPONSE.
FT CHAIN 1 23 BY SIMILARITY.
FT MOD_RES 24 24 PYROGLUTAMIC CARBOXYLIC ACID (BY
FT SIMILARITY).
FT DISULFID 34 59 BY SIMILARITY.
FT DISULFID 35 75 BY SIMILARITY.
FT SEQUENCE 99 AA; 10900 MW; 98A2CD26 CRC32;
SQ
Query Match 90.7%; Score 88; DB 1; Length 99;
Best Local Similarity 83.3%; Pred. No. 7.31e-08;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
Db 73 DVCADPKKKWQ 84
QY 1 DVCADPKKKWQ 12
RESULT 10
ID MIP4_HUMAN STANDARD; PRT; 89 AA.
AC P55774;
DT 01-NOV-1997 (REL. 35, CREATED)
DT 01-NOV-1997 (REL. 35, LAST SEQUENCE UPDATE)
DE MACROPHAGE INFLAMMATORY PROTEIN 4 (MIP-4) (PULMONARY AND
DE ACTIVATION-REGULATED CHEMOKINE) (CC CHEMOKINE PARC) (ALTERNATIVE
DE ACTIVATED MACROPHAGE ASSOCIATED CC CHEMOKINE 1) (AMAC-1).
GN SCYA18 OR MIP4.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RA LI H., RUBEN S.;
RP SEQUENCE FROM N.A.
RT "Macrophage inflammatory protein-3 and -4.";
RL PATENT NUMBER US5504003, 02-APR-1996.
RN [2]
RP SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
RC TISSUE=AORTA, AND LUNG;
RX MEDLINE; 97376836.
RA HIESHIMA K., INAI T., BABA M., SHOUDAI K., ISHIZUKA K.,
RA NAKAGAWA T., TSURUTA J., TAKEYA M., SAKAKI Y., TAKATSUKI K.,
RA MIURA R., OPDENAKKER G., VAN DAMME J., YOSHIE O., NOMIYAMA H.;

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RT "A novel human CC chemokine PARC that is most homologous to
RT macrophage-inflammatory protein-1 alpha/LD78 alpha and chemotactic
RT for T lymphocytes, but not for monocytes.";
RL J. IMMUNOL. 159:1140-1149(1997).
RN [3]
RP SEQUENCE FROM N.A.
RA KODELJA V., MUELLER C., POLITZ O., HAKIY N., ORFANOS C.E., GOERDT S.;
RL SUBMITTED (AUG-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [4]
RP DISCUSSION OF SEQUENCE.
RX MEDLINE; 97275308.
RA WELLS T.N.C., PEITSCH M.C.;
RT "The chemokine information source: identification and
RT characterization of novel chemokines using the WorldWideWeb and
RT expressed sequence tag databases.";
RL J. LEUKOC. BIOL. 61:545-550(1997).
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS LYMPHOCYTES BUT NOT
CC MONOCYTES OR GRANULOCYTES. MAY BE INVOLVED IN B CELL MIGRATION
CC INTO B CELL FOLLICLES IN LYMPH NODES.
CC -!- TISSUE SPECIFICITY: EXPRESSED AT HIGH LEVELS IN THE LUNG. A LOWER
CC LEVEL EXPRESSION IS SEEN IN LYMPHOID TISSUES SUCH AS LYMPH NODES,
CC THYMUS AND APPENDIX.
CC -!- INDUCTION: BY LIPOPOLYSACCHARIDE (LPS).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC -----
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CC -----
DR EMBL; AB000221; D1022520; -
DR EMBL; Y13710; E321838; -
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; i18; 1.
DR HSP; P13236; LHUN.
KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
FT CHAIN 1 20 MACROPHAGE INFLAMMATORY PROTEIN 4.
FT DISULFID 21 89 BY SIMILARITY.
FT DISULFID 30 54 BY SIMILARITY.
FT DISULFID 31 70 BY SIMILARITY.
FT SEQUENCE 89 AA; 9849 MW; 052AA3DC CRC32;
SQ
Query Match 88.7%; Score 86; DB 1; Length 89;
Best Local Similarity 83.3%; Pred. No. 2.31e-07;
Matches 10; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
Db 68 QICADPNKKWQ 79
QY 1 QICADPNKKWQ 12
RESULT 11
ID MCP1_MOUSE STANDARD; PRT; 148 AA.
AC P10148;
DT 01-MAR-1989 (REL. 10, CREATED)
DT 01-MAR-1989 (REL. 10, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1) (PLATELET-DERIVED
DE GROWTH FACTOR-INDUCIBLE PROTEIN JE).
GN SCYA2 OR MCP1 OR JE.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 89093129.
RA KAWAHARA R.S., DEUEL T.F.;
RT "Platelet-derived growth factor-inducible gene JE is a member of a
RT family of small inducible genes related to platelet factor 4.";

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RL J. BIOL. CHEM. 264:679-682(1989).

RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE: 88234501.
RA ROLLINS B.J., MORRISON E.D., STILES C.D.;
RT "Cloning and expression of JE, a gene inducible by platelet-derived
RT growth factor and whose product has cytokine-like properties."
RL PROC. NATL. ACAD. SCI. U.S.A. 85:3738-3742(1988).
RN [3]
RP SEQUENCE OF 26-42.
RX MEDLINE: 91293127.
RA VAN DAMME J., DECOCK B., BERTINI R., CONINGS R., LENAERTS J.-P.,
RA PUT W., OPDENAKKER G., MANTOVANI A.;
RT "Production and identification of natural monocyte chemotactic
RT protein from virally infected murine fibroblasts. Relationship with
RT the product of the mouse competence (JE) gene."
RL EUR. J. BIOCHEM. 199:223-229(1991).
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
CC NEUTROPHILS.
CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
CC -!- INDUCTION: BY PLATELET-DERIVED GROWTH FACTOR.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).

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DR EMBL: J04467; G387169; -.
DR EMBL: M19681; G387168; -.
DR PIR: A30209; A30209.
DR PIR: A30861; A30861.
DR PIR: S16226; S16226.
DR MGD: MGI:98259; SCYA2.
DR PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM: PF00048; i18; 1.
DR HSP: P13500; 1DOL.
KW CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE; GLYCOPROTEIN.
FT SIGNAL 1 23
FT CHAIN 24 148
FT MOD_RES 24 24
FT MONOCYTE CHEMOTACTIC PROTEIN 1.
FT PYRROLIDONE CARBOXYLIC ACID (BY
FT SIMILARITY).
FT DISULFID 34 59
FT BY SIMILARITY.
FT DISULFID 35 75
FT BY SIMILARITY.
FT CARBOHYD 126 126
FT POTENTIAL.
SQ SEQUENCE 148 AA; 16326 MW; B7572BEC CRC32;

Query Match 88.7%; Score 86; DB 1; Length 148;
Best Local Similarity 75.0%; Pred. No. 2.31e-07;
Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 73 EVCADPKKEWQ 84
:::|||||
QY 1 DICADPKKRWQ 12

RESULT 12
ID MCPA_BOVIN STANDARD; PRT; 99 AA.

AC P28291;
DT 01-DEC-1992 (REL. 24, CREATED)
DT 01-DEC-1992 (REL. 24, LAST SEQUENCE UPDATE)
DT 01-NOV-1995 (REL. 32, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 1A PRECURSOR (MCP-1) (ACIDIC
DE SEMINAL FLUID PROTEIN).
OS BOS TAURUS (BOVINE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC ARTIODACTYLA; RUMINANTIA; PECORA; BOVOIDEA; BOVINAE; BOS.
RN [1]
RP SEQUENCE FROM N.A.

RC TISSUE-SEMINAL PLASMA;

RX MEDLINE: 92096117.
RA WEMPE F., HENSCHEN A., SCHEIT K.H.;
RT "Gene expression and cDNA cloning identified a major basic protein
RT constituent of bovine seminal plasma as bovine
RT monocyte-chemoattractant protein-1 (MCP-1).";
RL DNA CELL BIOL. 10:671-679(1991).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE-SEMINAL PLASMA;
RX MEDLINE: 92181448.
RA WEMPE F., EINSPANIER R., SCHEIT K.H.;
RT "Characterization by cDNA cloning of the mRNA of a new growth factor
RT from bovine seminal plasma: acidic seminal fluid protein.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 183:232-237(1992).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE: 94338337.
RA WEMPE F., KUHLMANN J.K., SCHEIT K.H.;
RT "Characterization of the bovine monocyte chemoattractant protein-1
RT gene.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 202:1272-1279(1994).
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
CC NEUTROPHILS.

CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).

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DR EMBL: L32659; G624394; -.
DR EMBL: M84602; G163395; -.
DR PIR: A39296; A39296.
DR PIR: JC2336; JC2336.
DR PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM: PF00048; i18; 1.
DR HSP: P13500; 1DON.
KW CYTOKINE; CHEMOTAXIS; SIGNAL.

FT SIGNAL 1 23
FT CHAIN 24 99
FT MOD_RES 24 24
FT MONOCYTE CHEMOTACTIC PROTEIN 1A.
FT PYRROLIDONE CARBOXYLIC ACID (BY
FT SIMILARITY).
FT DISULFID 34 59
FT BY SIMILARITY.
FT DISULFID 35 75
FT BY SIMILARITY.
SQ SEQUENCE 99 AA; 11114 MW; C8F5821D CRC32;

Query Match 86.6%; Score 84; DB 1; Length 99;
Best Local Similarity 75.0%; Pred. No. 7.20e-07;
Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 73 ELCADPKKQWQ 84
:::|||||
QY 1 DICADPKKRWQ 12

RESULT 13
ID MCP1_RABIT STANDARD; PRT; 125 AA.

AC P28292;
DT 01-DEC-1992 (REL. 24, CREATED)
DT 01-DEC-1992 (REL. 24, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1).
DE SCYA2.
OS ORCTOLAGUS CUNICULUS (RABBIT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC LAGOMORPHA; LEPORIDAE; ORCTOLAGUS.
RN [1]
RP SEQUENCE FROM N.A.

RC STRAIN-NEW ZEALAND WHITE; TISSUE-SPLEEN;
RX MEDLINE: 91225489.
RA YOSHIMURA T., YUHKI N.;
RT "Neutrophil attractant/activation protein-1 and monocyte
RT chemottractant protein-1 in rabbit. cDNA cloning and their
RT expression in spleen cells.";
RL J. IMMUNOL. 146:3483-3488(1991).
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
CC NEUTROPHILS.
CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC -----
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CC -----
DR EMBL: M57440; G163470; -
DR PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM: PF00048; i18; 1.
DR HSP: P13500; 1DON.
KW CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE; GLYCOPROTEIN.
FT SIGNAL 1 23
FT CHAIN 24 125
FT MOD_RES 24 24
FT PYRROLIDONE CARBOXYLIC ACID (BY
FT SIMILARITY).
FT DISULFID 34 59
FT BY SIMILARITY.
FT DISULFID 35 75
FT BY SIMILARITY.
FT CARBOHYD 40 40
FT POTENTIAL.
FT CARBOHYD 55 55
FT POTENTIAL.
FT CARBOHYD 112 112
FT POTENTIAL.
SQ SEQUENCE 125 AA; 13776 MW; FBAC9D27 CRC32;
Query Match 86.6%; Score 84; DB 1; Length 125;
Best Local Similarity 90.9%; Pred. No. 7.20e-07;
Matches 10; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
Db 74 ICADPKQKWKVQ 84
||||| |||||
QY 2 ICADPKKWKVQ 12
RESULT 14
ID MCP3 HUMAN STANDARD; PRT; 99 AA.
AC P80098;
DT 01-DEC-1992 (REL. 24, CREATED)
DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 3 (MCP-3) (MONOCYTE
DE CHEMOTACTIC PROTEIN 3 PRECURSOR (MCP-3) (NC28).
GN SCYA7 OR MCP3.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA;
OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A., AND SEQUENCE OF 31-67 AND 71-99.
RX MEDLINE: 93213290.
RA OPDENAKKER G., FROEN G., FITEN P., PROOST P., VAN DAMME J.;
RT "Human monocyte chemotactic protein-3 (MCP-3): molecular cloning of
RT the cDNA and comparison with other chemokines.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 191:535-542(1993).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE: 94375065.
RA OPDENAKKER G., FITEN P., NYS G., FROEN G., VAN ROY N., SPELEMAN F.,
RA LAUREYS G., VAN DAMME J.;
RT "The human MCP-3 gene (SCYA7): cloning, sequence analysis, and
RT assignment to the C-C chemokine gene cluster on chromosome
RT 17q11.2-q12.";

RL GENOMICS 21:403-408(1994).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE: 93305913.
RA MINTY A., CHALON P., GUILLEMOT J.C., KAGHAD M., LIAUZON P.,
RA MAGAZIN M., MILOUX B., MINTY C., RAMOND P., VITA N., LUPKER J.,
RA SHIRE D., FERRARA P., CAPUT D.;
RT "Molecular cloning of the MCP-3 chemokine gene and regulation of its
RT expression.";
RL EUR. CYTOKINE NETW. 4:99-110(1993).
RN [4]
RP SEQUENCE OF 30-99.
RC TISSUE-OSTEOSARCOMA;
RX MEDLINE: 92308855.
RA VAN DAMME J., PROOST P., LENAERTS J.-P., OPDENAKKER G.;
RT "Structural and functional identification of two human, tumor-derived
RT monocyte chemotactic proteins (MCP-2 and MCP-3) belonging to the
RT chemokine family.";
RL J. EXP. MED. 176:59-65(1992).
RN [5]
RP STRUCTURE BY NMR, AND SUBUNIT.
RX MEDLINE: 97053697.
RA KIM K.-S., RAJARATHNAM K., CLARK-LEWIS I., SYKES B.D.;
RT "Structural characterization of a monomeric chemokine: monocyte
RT chemottractant protein-3.";
RL FEBS LETT. 395:277-282(1996).
RN [6]
RP STRUCTURE BY NMR.
RX MEDLINE: 97263733.
RA MEUNIER S., BERNASSAU J.-M., GUILLEMOT J.-C., FERRARA P., DARBON H.;
RT "determination of the three-dimensional structure of CC chemokine
RT monocyte chemottractant protein 3 by 1H two-dimensional NMR
RT spectroscopy.";
RL BIOCHEMISTRY 36:4412-4422(1997).
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES AND
CC EOSINOPHILS, BUT NOT NEUTROPHILS. AUGMENTS MONOCYTE ANTI-TUMOR
CC ACTIVITY. ALSO INDUCES THE RELEASE OF GELATINASE B. THIS PROTEIN
CC CAN BIND HEPARIN.
CC -!- SUBUNIT: MONOMER.
CC -!- PTM: O-GLYCOSYLATED.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
CC -----
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CC -----
DR EMBL: X72308; G313708; ALT_INIT.
DR EMBL: X72309; -; NOT_ANNOTATED_CDS.
DR EMBL: X71087; G288393;
DR EMBL: X71087; G288398; ALT_INIT.
DR EMBL: X71087; G288397; ALT_INIT.
DR PIR: JC1478; JC1478.
DR PIR: S32222; S32222.
DR PIR: A54678; A54678.
DR PDB: INCV; 15-OCT-97.
DR MIM: 158106; -
DR PROSITE: PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM: PF00048; i18; 1.
KW CYTOKINE; CHEMOTAXIS; HEPARIN-BINDING; GLYCOPROTEIN; SIGNAL;
KW INFLAMMATORY RESPONSE; 3D-STRUCTURE.
FT SIGNAL 1 23
FT CHAIN 24 99
FT MOD_RES 24 24
FT PYRROLIDONE CARBOXYLIC ACID.
FT DISULFID 34 59
FT BY SIMILARITY.
FT DISULFID 35 75
FT POTENTIAL.
FT CARBOHYD 29 29
FT CONFLICT 30 30
FT CONFLICT 68 70
T -> K (IN REF. 4).
MISSING (IN REF. 4).

SQ SEQUENCE 99 AA: 11200 MW; 7502E19C CRC32;

Query Match 84.5%; Score 82; DB 1; Length 99;
Best Local Similarity 75.0%; Pred. No. 2.22e-06;
Matches 9; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Db 73 EICADPTOKWVQ 84
:|||||
QY 1 DICADPKKKWVQ 12

RESULT 15
ID MCP1_RAT STANDARD; PRT: 148 AA.
AC P14844;
DT 01-APR-1990 (REL. 14, CREATED)
DT 01-APR-1990 (REL. 14, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE MONOCYTE CHEMOTACTIC PROTEIN 1 PRECURSOR (MCP-1) (IMMEDIATE-EARLY
DE SERUM-RESPONSIVE JE PROTEIN).
GN SCY2 OR JE OR MCP1.
OS RATTUS NORVEGICUS (RAT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=WAG/R1J; TISSUE=KIDNEY;
RX MEDLINE; 90174947.
RA YOSHIMURA T., TAKEYA M., TAKAHASHI K.;
RA TIMMERS H.T.H.M., PRONK G.J., BOS J.L., VAN DER EB A.J.;
RT "Analysis of the rat JE gene promoter identifies an AP-1 binding site
RT essential for basal expression but not for TPA induction.";
RL NUCLEIC ACIDS RES. 18:23-34(1990).
RN [2]

RP SEQUENCE FROM N.A.
RX MEDLINE; 91128376.
RA YOSHIMURA T., TAKEYA M., TAKAHASHI K.;
RT "Molecular cloning of rat monocyte chemoattractant protein-1 (MCP-1)
RT and its expression in rat spleen cells and tumor cell lines.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 174:504-509(1991).
CC -!- FUNCTION: CHEMOTACTIC FACTOR THAT ATTRACTS MONOCYTES, BUT NOT
CC NEUTROPHILS.
CC -!- SUBUNIT: MONOMER OR HOMODIMER; IN EQUILIBRIUM (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE BETA FAMILY (SMALL CYTOKINE
CC C-C) (CHEMOKINE CC).
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DR EMBL; X17053; G55531; -.
DR EMBL; M57441; G205334; -.
DR PIR; JN0128; JN0128.
DR PIR; S07723; S07723.
DR PROSITE; PS00472; SMALL_CYTOKINES_CC; 1.
DR PFAM; PF00048; i18; 1.
DR HSP; P13500; 1DOL.
KW CYTOKINE; CHEMOTAXIS; SIGNAL; INFLAMMATORY RESPONSE; GLYCOPROTEIN.
FT SIGNAL 1 23 BY SIMILARITY.
FT CHAIN 24 148 MONOCYTE CHEMOTACTIC PROTEIN 1.
FT MOD_RES 24 24 PYRROLIDONE CARBOXYLIC ACID (BY
FT SIMILARITY).
FT DISULFID 34 59 BY SIMILARITY.
FT DISULFID 35 75 BY SIMILARITY.
FT CARBOHYD 126 126 POTENTIAL.
SQ SEQUENCE 148 AA; 16460 MW; DB97F97C CRC32;

Query Match 84.5%; Score 82; DB 1; Length 148;
Best Local Similarity 75.0%; Pred. No. 2.22e-06;
Matches 9; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 73 EICADPNKEWVQ 84
:|||||
QY 1 DICADPKKKWVQ 12

Search completed: Fri Feb 4 17:57:13 2000
Job time : 7 secs.

Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 71 dicadpkkkvwq 82
 |||||
 QY 1 DICADPKKKWQ 12

RESULT 2

ID W00667 standard; Protein; 97 AA.
 AC W00667;
 DT 02-MAY-1997 (first entry)
 DE Pancreas-expressed chemokine-1.
 KW Pancreas-derived chemokine; PANEC-1; PANEC-2; diagnosis;
 OS inflammation; disease; cancer.
 OS Homo sapiens.
 PN W09625497-A1.
 PD 22-AUG-1996.
 PF 16-FEB-1996; U02225.
 PF 17-FEB-1995; US-390740.
 PA (INCY-) INCYTE PHARM INC.
 PI Bandman O, Coleman R, Wilde CG;
 DR WPI; 96-393398/39.
 DR N-PSDB: T33527.
 PT Nucleotide and protein sequences for human PANEC-1 and PANEC-2 -
 useful in diagnosis and therapy of pancreatic diseases
 PS Claim 8; Page 28-29; 43pp; English.
 CC The sequences given in W00667-68 represent pancreas-derived chemokines,
 CC PANEC-1 and PANEC-2. These chemokines are highly expressed and
 CC specifically expressed in the pancreas and may therefore be used in
 CC diagnostic assays based on chemokine production in cases of
 CC inflammation or disease affecting the pancreas. These assays allow
 CC the early and accurate diagnosis of pancreatic disorders, and can
 CC differentiate between invasive diseases and genetic syndromes.
 SQ Sequence 97 AA;

Query Match 100.0%; Score 97; DB 21; Length 97;

Best Local Similarity 100.0%; Pred. No. 8.92e-03; Indels 0; Gaps 0;
 Matches 12; Conservative 0; Mismatches 0;

Db 71 dicadpkkkvwq 82
 |||||
 QY 1 DICADPKKKWQ 12

RESULT 3

ID W10099 standard; Protein; 97 AA.
 AC W10099;
 DT 30-SEP-1997 (first entry)
 DE Human eotaxin.
 KW Human; eotaxin; eosinophil; chemoattractant; stimulation;
 KW accumulation; attraction; chemotaxis; diagnosis; prevention;
 KW treatment; disease; inflammation; allergy; asthma; rhinitis;
 KW hypersensitivity; lung; pneumonia; Loeffler's; syndrome;
 KW interstitial; ILD; idiopathic pulmonary fibrosis;
 KW rheumatoid arthritis; systemic; lupus erythematosus; SLE;
 KW ankylosing spondylitis; sclerosis; Sjorgen's; polymyositis;
 KW dermatomyositis; bowel; anaphylaxis; drug; penicillin;
 KW cephalosporin; insect sting; Crohn's; ulcerative colitis;
 KW spondyloarthropathy; scleroderma; psoriasis; dermatosis;
 KW dermatitis; eczema; atopic; urticaria; necrotizing; cutaneous;
 KW vasculitis; myositis; fascitis; multiple sclerosis;
 KW myasthenia gravis; juvenile onset diabetes; glomerulonephritis;
 KW autoimmune; thyroiditis; Bechet's; graft; rejection;
 KW transplantation; allograft; graft versus host; cancer;
 KW leukocyte infiltration; reperfusion injury; atherosclerosis;
 KW haematologic malignancy; septic; endotoxemic; shock;
 KW polymyositis; dermatomyositis; immunosuppression; immunodeficiency;
 KW AIDS; radiation therapy; chemotherapy; autoimmune; corticosteroid;
 KW infection.
 OS Homo sapiens.
 PN W09700960-A1.
 PD 09-JAN-1997.
 PF 21-JUN-1996; U10723.

PR 23-JUN-1995; US-494093.
 PA (LEUK-) LEUKOSITE INC.
 PI Mackay C, Newman W, Ponath PD, Qin S, Ringler DU;
 DR WPI; 97-087387/08.
 DR N-PSDB: T58777.
 PT New isolated human eotaxin gene - used to develop prods. for the
 diagnosis and treatment of e.g. inflammation, allergies, auto-immune
 PT disease, infections and tumours
 PS Claim 3; Pages 95-96; 130pp; English.
 CC The present sequence is human eotaxin (hE), an eosinophil
 CC specific chemoattractant capable of stimulating eosinophil
 CC accumulation and/or attracting eosinophils (including chemotaxis).
 CC It can be used to develop products for the diagnosis, prevention or
 CC treatment of HE associated diseases or conditions. The products can
 CC be used to treat inflammatory or allergic diseases and conditions,
 CC including respiratory allergic diseases (e.g. asthma, allergic
 CC rhinitis, hypersensitivity lung diseases or pneumonitis,
 CC eosinophilic pneumonias such as Loeffler's syndrome and chronic
 CC eosinophilic pneumonia, interstitial lung diseases (ILD) such as
 CC idiopathic pulmonary fibrosis or ILD associated with rheumatoid
 CC arthritis, systemic lupus erythematosus (SLE), ankylosing
 CC spondylitis, systemic sclerosis, Sjorgen's syndrome, polymyositis
 CC or dermatomyositis), systemic anaphylaxis or hypersensitivity
 CC responses, drug allergies (e.g. to penicillin and cephalosporins),
 CC insect sting allergies, inflammatory bowel diseases (e.g. Crohn's
 CC disease and ulcerative colitis), spondyloarthropathies,
 CC scleroderma, psoriasis and inflammatory dermatoses (e.g.
 CC dermatitis, eczema, atopic dermatitis, allergic contact dermatitis,
 CC urticaria and necrotizing, cutaneous and hypersensitivity
 CC vasculitis), eosinophilic myositis and fascitis, multiple
 CC sclerosis, SLE, myasthenia gravis, juvenile onset diabetes,
 CC glomerulonephritis, autoimmune thyroiditis, Bechet's disease, graft
 CC rejection (e.g. in transplantation) including allograft rejection or
 CC graft versus host disease and cancers with leukocyte infiltration
 CC of the skin or organs. The products can also be used to treat other
 CC diseases or conditions requiring the inhibition of undesirable
 CC inflammatory responses, including reperfusion injury,
 CC atherosclerosis, certain haematologic malignancies, cytokine
 CC induced toxicity (e.g. septic or endotoxic shock), polymyositis,
 CC dermatomyositis, immunosuppression (e.g. in individuals with
 CC immunodeficiency syndromes such as AIDS, undergoing radiation
 CC therapy, chemotherapy, therapy for autoimmune disease or other drug
 CC therapy, such as corticosteroid therapy, which causes
 CC immunosuppression), immunosuppression due to (e.g. congenital)
 CC deficiency (e.g. in eotaxin) or infectious diseases such as parasitic
 CC diseases.
 CC Degenerate primers based on the guinea pig eotaxin amino acid
 CC sequence were used for the reverse transcriptase polymerase chain
 CC reaction (RT-PCR) amplification of RNA isolated from inflamed,
 CC eosinophilic lung tissue obtained from Balb/c mice sensitised to
 CC ovalbumin. The amplification product was used as a probe to screen
 CC a human genomic library in vector EMBL3 SP6/T7 to obtain the hE
 CC gene.
 SQ Sequence 97 AA;

Query Match 100.0%; Score 97; DB 23; Length 97;

Best Local Similarity 100.0%; Pred. No. 8.92e-03; Indels 0; Gaps 0;
 Matches 12; Conservative 0; Mismatches 0;

Db 71 dicadpkkkvwq 82

QY 1 DICADPKKKWQ 12

RESULT 4

ID W14990 standard; Protein; 97 AA.
 AC W14990;
 DT 01-DEC-1997 (first entry)
 DE Human eosinocyte CC type chemokine eotaxin.
 KW Human; eosinocyte; CC type; chemokine; eotaxin; calcium; skin;
 KW small intestine; agonist; screening; asthma; allergy; atopic.
 KW antibody; diagnosis; assay; disorder;
 OS Homo sapiens.


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PN W09712914-A1.
PD 10-APR-1997.
PF 01-OCT-1996; J02851.
PR 28-FEB-1996; JP-041965.
PR 05-OCT-1995; JP-259067.
PA (SHIO ) SHIONOGI & CO LTD.
PI Harada S., Kitaura M, Nakajima T;
DR WPI; 97-226168/20.
DR N-PSDB; T62944.
PT Human CC chemokine (eotaxin) active on eosinocytes - useful for
PT screening for eotaxin (ant)agonist(s), e.g. for treating
PT inflammation
PT
PS Claim 2; Pages 27-28; 45pp; Japanese.
CC The present sequence is the human eosinocyte, CC type
CC chemokine, eotaxin, which increases calcium flux in human
CC eosinocytes and is a human analogue of guinea pig eotaxin. The
CC eotaxin was derived from human small intestine, and is a specific
CC agonist for human CC type chemokine receptor 3. It may be used to
CC screen potential agonists and antagonists, which may be useful as
CC anti-inflammatories. An anti-eotaxin antibody may be used in
CC diagnostic assays for eotaxin, which is implicated in inflammatory
CC disorders, e.g. asthma, other allergies and atopic skin
CC inflammation.
SQ Sequence 97 AA;

Query Match 100.0%; Score 97; DB 24; Length 97;
Best Local Similarity 100.0%; Pred. No. 8.92e-03;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 71 dicadpkkkwwq 82
   |||||
Qy 1 DICADPKKKWVQ 12

RESULT 5
ID R70252 standard; protein; 73 AA.
AC R70252;
DE Eotaxin chemoattractant protein.
KW Eotaxin; chemoattractant; inflammatory disease; inflammation;
KW asthma; rhinitis; eczema; macrophage; lymphocyte; neutrophil;
KW mast cell; connective tissue cell; vascular endothelial cell;
KW eosinophil.
OS Cavia cobaya.
PN W09507985-A.
PD 23-MAR-1995.
PF 14-SEP-1994; G02006.
PR 14-SEP-1993; GB-018984.
PR 29-APR-1994; GB-008602.
PA (LUDW-) LUDWIG INST CANCER RES.
PA (NAHE-) NAT HEART & LUNG INST.
PI Griffiths-Johnson DA, Hsuan JJ, Jose PJ, Williams TJ;
DR WPI; 95-131353/17.
PT Isolated chemoattractant protein, termed eotaxin - useful for
PT treating asthma and other inflammatory diseases
PS Claim 6; Page 31; 50pp; English.
CC Eotaxin is useful for treatment of asthma or other diseases with an
CC inflammatory component, especially accumulation of eosinophils, e.g.
CC rhinitis or eczema. Eotaxin is obtainable from bronchoalveolar
CC lavage fluid of a subject after antigen challenge; from an
CC inflammatory exudate fluid or from an in vitro culture of
CC macrophages, lymphocytes, neutrophils, mast cells, airway cells,
CC connective tissue cells, vascular endothelial cells or eosinophils.
SQ Sequence 73 AA;

Query Match 93.8%; Score 91; DB 13; Length 73;
Best Local Similarity 100.0%; Pred. No. 3.75e-02;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 48 icadpkkkwwq 58
   |||||
Qy 2 ICADPKKKWVQ 12

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RESULT 6
ID W14991 standard; Protein; 96 AA.
AC W14991;
DE Guinea pig eosinocyte CC type chemokine eotaxin.
KW Guinea pig; eosinocyte; CC type; chemokine; eotaxin; calcium; skin;
KW small intestine; agonist; screening; antagonist; inflammation;
KW antibody; diagnosis; assay; disorder; asthma; allergy; atopic.
OS Cavia cobaya.
PN W09712914-A1.
PD 10-APR-1997.
PF 01-OCT-1996; J02851.
PR 28-FEB-1996; JP-041965.
PR 05-OCT-1995; JP-259067.
PA (SHIO ) SHIONOGI & CO LTD.
PI Harada S., Kitaura M, Nakajima T;
DR WPI; 97-226168/20.
DR N-PSDB; T62945.
PT Human CC chemokine (eotaxin) active on eosinocytes - useful for
PT screening for eotaxin (ant)agonist(s), e.g. for treating
PT inflammation
PT
PS Example 2; Pages 30-31; 45pp; Japanese.
CC The present sequence is the guinea pig eosinocyte, CC type
CC chemokine, eotaxin, which increases calcium flux in guinea pig
CC eosinocytes. The eotaxin may be used to screen potential
CC agonists and antagonists, which may be useful as
CC anti-inflammatories. An anti-eotaxin antibody may be used in
CC diagnostic assays for eotaxin, which is implicated in inflammatory
CC disorders, e.g. asthma, other allergies and atopic skin
CC inflammation.
SQ Sequence 96 AA;

Query Match 93.8%; Score 91; DB 24; Length 96;
Best Local Similarity 100.0%; Pred. No. 3.75e-02;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 71 icadpkkkwwq 81
   |||||
Qy 2 ICADPKKKWVQ 12

RESULT 7
ID W13598 standard; peptide; 66 AA.
AC W13598;
DE Monocyte chemoattractant protein analogue MCP-1 (10-76).
KW Truncated monocyte chemoattractant protein-1; inhibitor;
KW receptor binding; anti inflammatory; basophil; lymphocyte; allergy;
KW chronic inflammatory disease; arthritis; arteriosclerosis;
KW lung disease.
OS Homo sapiens.
PN CA2152141-A.
PD 20-DEC-1996.
PF 19-JUN-1995; 152141.
PR 19-JUN-1995; CA-152141.
PA (LEWIS) LEWIS I.
PI Gong J, Lewis I;
DR WPI; 97-165844/16.
PT N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) -
PT lacks MCP-1 activity and inhibits receptor binding, useful as
PT anti-inflammatory agent
PS Disclosure; Page 5; 27pp; English.
CC The present sequence represents an analogue, MCP-1 (10-76), of monocyte
CC chemoattractant protein-1 (MCP-1). The analogue, which lacks the
CC N-terminal amino acids 1-9 of MCP-1, acts as an antagonist of MCP-1
CC as it lacks MCP-1 biological activity and inhibits binding to a MCP-1
CC receptor. The analogue is useful as an anti-inflammatory agent to block
CC the effects of MCP-1 which is an inflammatory mediator causing migration
CC of monocytes and other cells e.g. basophils and lymphocytes into
CC inflammation sites. MCP-1 has been implicated in allergic and chronic
CC inflammatory diseases e.g. arthritis, arteriosclerosis and several lung
CC diseases. The analogue competes more effectively with MCP-1 for binding

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CC MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably
 CC providing 50% inhibition of binding at a 25:1 ratio or less, compared
 CC with 75:1 for prior art mutant 7ND.
 SQ Sequence 66 AA;

Query Match 91.8%; Score 89; DB 24; Length 66;
 Best Local Similarity 83.3%; Pred. No. 6.04e-02;
 Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 40 eicadpkqkvwq 51
 :||||| ||||
 QY 1 DICADPKKKWQ 12

RESULT 8

ID W13599 standard; peptide; 67 AA.
 AC W13599;
 DT 07-NOV-1997 (first entry)
 DE Monocyte chemoattractant protein analogue MCP-1 (11-76).
 KW Truncated monocyte chemoattractant protein-1; inhibitor;
 KW receptor binding; anti-inflammatory; basophil; lymphocyte; allergy;
 KW chronic inflammatory disease; arthritis; arteriosclerosis;
 KW lung disease.
 OS Homo sapiens.
 PN CA2152141-A.
 PD 20-DEC-1996.
 PF 19-JUN-1995; 152141.
 PR 19-JUN-1995; CA-152141.
 PA (LEWI/) LEWIS I.
 PI Gong J, Lewis I.
 DI WPI: 97-165844/16.
 PT N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) -
 PT lacks MCP-1 activity and inhibits receptor binding, useful as
 PT anti-inflammatory agent
 PS Disclosure; Page 5; 27pp; English.
 CC The present sequence represents an analogue, MCP-1 (11-76), of monocyte
 CC chemoattractant protein-1 (MCP-1). The analogue, which lacks the
 CC N-terminal amino acids 1-10 of MCP-1, acts as an antagonist of MCP-1
 CC as it lacks MCP-1 biological activity and inhibits binding to a MCP-1
 CC receptor. The analogue is useful as an anti-inflammatory agent to block
 CC the effects of MCP-1 which is an inflammatory mediator causing migration
 CC of monocytes and other cells e.g. basophils and lymphocytes into
 CC inflammatory sites. MCP-1 has been implicated in allergic and chronic
 CC inflammatory diseases e.g. arthritis, arteriosclerosis and several lung
 CC diseases. The analogue competes more effectively with MCP-1 for binding
 CC MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably
 CC providing 50% inhibition of binding at a 25:1 ratio or less, compared
 CC with 75:1 for prior art mutant 7ND.
 SQ Sequence 67 AA;

Query Match 91.8%; Score 89; DB 24; Length 67;
 Best Local Similarity 83.3%; Pred. No. 6.04e-02;
 Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 41 eicadpkqkvwq 52
 :||||| ||||
 QY 1 DICADPKKKWQ 12

RESULT 9

ID W13597 standard; peptide; 68 AA.
 AC W13597;
 DT 07-NOV-1997 (first entry)
 DE Monocyte chemoattractant protein analogue MCP-1 (9-76).
 KW Truncated monocyte chemoattractant protein-1; inhibitor;
 KW receptor binding; anti-inflammatory; basophil; lymphocyte; allergy;
 KW chronic inflammatory disease; arthritis; arteriosclerosis;
 KW lung disease.
 OS Homo sapiens.
 PN CA2152141-A.
 PD 20-DEC-1996.
 PF 19-JUN-1995; 152141.
 PR 19-JUN-1995; CA-152141.

PA (LEWI/) LEWIS I.
 PI Gong J, Lewis I.
 DI WPI: 97-165844/16.
 PT N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) -
 PT lacks MCP-1 activity and inhibits receptor binding, useful as
 PT anti-inflammatory agent
 PS Claim 7; Page 5; 27pp; English.
 CC The present sequence represents an analogue, MCP-1 (9-76), of monocyte
 CC chemoattractant protein-1 (MCP-1). The analogue, which lacks the
 CC N-terminal amino acids 1-8 of MCP-1, acts as an antagonist of MCP-1
 CC as it lacks MCP-1 biological activity and inhibits binding to a MCP-1
 CC receptor. The analogue is useful as an anti-inflammatory agent to block
 CC the effects of MCP-1 which is an inflammatory mediator causing migration
 CC of monocytes and other cells e.g. basophils and lymphocytes into
 CC inflammation sites. MCP-1 has been implicated in allergic and chronic
 CC inflammatory diseases e.g. arthritis, arteriosclerosis and several lung
 CC diseases. The analogue competes more effectively with MCP-1 for binding
 CC MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably
 CC providing 50% inhibition of binding at a 25:1 ratio or less, compared
 CC with 75:1 for prior art mutant 7ND.
 SQ Sequence 68 AA;

Query Match 91.8%; Score 89; DB 24; Length 68;
 Best Local Similarity 83.3%; Pred. No. 6.04e-02;
 Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 42 eicadpkqkvwq 53
 :||||| ||||
 QY 1 DICADPKKKWQ 12

RESULT 10

ID R87678 standard; protein; 69 AA.
 AC R87678;
 DT 21-FEB-1996 (first entry)
 DE des(2-8) MCP-1.
 KW monocyte chemoattractant protein; MCP-1; mutant; restenosis;
 KW angioplasty.
 OS Homo sapiens.
 FT Key Location/Qualifiers
 FT modified_site 2..3
 FT /note= "amino acids 2-8 of the native protein have
 FT been deleted between these residues"
 FT disulfide_bond 4..29
 FT disulfide_bond 5..45
 FN W09513295-A1.
 PD 18-MAY-1995.
 PF 07-NOV-1994; U12874.
 PR 12-NOV-1993; US-152301.
 PA (DAND) DANA FARBER CANCER INST INC.
 PI Rollins B, Zhang Yu;
 DI WPI: 95-215031/28.

PT Human monocyte chemoattractant protein-1 (MCP-1) derivs. - are
 PT capable of inhibiting the monocyte chemo-attractant activity of
 PT endogenous MCP-1 and can be used to treat restenosis
 PS Claim 4; Page 11; 22pp; English.
 CC Monocyte chemoattractant protein-1 (MCP-1) derivatives are mutated such
 CC that they inhibit the monocyte chemoattractant activity of endogenous
 CC MCP-1, provided that the derivative has not been modified by the
 CC substitution of 28-Tyr by Leu and/or 30-Arg by Val. Preferred mutations
 CC are: (1) substitution of 28 Tyr by aspartate; (2) substitution of 24 Arg
 CC by Phe; (3) substitution of 3-Asp by Ala; and/or (4) deletion of amino
 CC acids 2-8. The present sequence is a specifically claimed human MCP-1
 CC derivative based on the parent protein disclosed in Rollins, Molecular
 CC and Cellular Biology, Vol. 9, No. 11, pp. 4687-4695, Nov. 1989.
 CC The peptides can be used to prevent restenosis, e.g. in patients
 CC undergoing coronary artery angioplasty.
 SQ Sequence 69 AA;

Query Match 91.8%; Score 89; DB 14; Length 69;
 Best Local Similarity 83.3%; Pred. No. 6.04e-02;
 Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

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Db 43 eicadpkqkvwq 54
QY 1 DICADPKKKWVQ 12

RESULT 11
ID W13596 standard; peptide; 69 AA.
AC W13596;
DE 07-NOV-1997 (first entry)
DE Monocyte chemoattractant protein analogue MCP-1 (8-76).
KW Truncated monocyte chemoattractant protein-1; inhibitor;
KW receptor binding; anti inflammatory; basophil; lymphocyte; allergy;
KW chronic inflammatory disease; arthritis; arteriosclerosis;
KW lung disease.
OS Homo sapiens.
PN CA2152141-A.
PD 20-DEC-1996.
PF 19-JUN-1995; 152141.
PR 19-JUN-1995; CA-152141.
PA (LEWIS/) LEWIS I.
PI Gong J, Lewis I;
DR WPI; 97-165844/16.
PT N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) -
PT lacks MCP-1 activity and inhibits receptor binding, useful as
PT anti-inflammatory agent
PS Claim 5; Page 5; 27pp; English.
CC The present sequence represents an analogue, MCP-1 (8-76), of monocyte
CC chemoattractant protein-1 (MCP-1). The analogue, which lacks the
CC N-terminal amino acids 1-7 of MCP-1, acts as an antagonist of MCP-1
CC as it lacks MCP-1 biological activity and inhibits binding to a MCP-1
CC receptor. The analogue is useful as an anti-inflammatory agent to block
CC the effects of MCP-1 which is an inflammatory mediator causing migration
CC of monocytes and other cells e.g. basophils and lymphocytes into
CC inflammation sites. MCP-1 has been implicated in allergic and chronic
CC inflammatory diseases e.g. arthritis, arteriosclerosis and several lung
CC diseases. The analogue competes more effectively with MCP-1 for binding
CC MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably
CC providing 50% inhibition of binding at a 25:1 ratio or less, compared
CC with 75:1 for prior art mutant 7ND.
SQ Sequence 69 AA;

Query Match 91.8%; Score 89; DB 24; Length 69;
Best Local Similarity 83.3%; Pred. No. 6.04e-02;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 43 eicadpkqkvwq 54
QY 1 DICADPKKKWVQ 12

RESULT 12
ID W40175 standard; Protein; 76 AA.
AC W40175;
DE 01-JUL-1998 (first entry)
DE Macrophage chemoattractant peptide designated GDCF-2.
KW Monocyte chemoattractant peptide; MCP; MCP-1; treatment; neoplasm;
KW infection; human; monocyte receptor; chemotactic response; inflammation;
KW monocyte infiltration.
OS Homo sapiens.
PN CA2152141-A.
PD 20-DEC-1996.
PF 19-JUN-1995; 152141.
PR 19-JUN-1995; CA-152141.
PA (LEWIS/) LEWIS I.
PI Gong J, Lewis I;
DR WPI; 97-165844/16.
PT N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) -
PT lacks MCP-1 activity and inhibits receptor binding, useful as
PT anti-inflammatory agent
PS Claim 5; Page 5; 27pp; English.
CC The present sequence represents an analogue, MCP-1 (8-76), of monocyte
CC chemoattractant protein-1 (MCP-1). The analogue, which lacks the
CC N-terminal amino acids 1-7 of MCP-1, acts as an antagonist of MCP-1
CC as it lacks MCP-1 biological activity and inhibits binding to a MCP-1
CC receptor. The analogue is useful as an anti-inflammatory agent to block
CC the effects of MCP-1 which is an inflammatory mediator causing migration
CC of monocytes and other cells e.g. basophils and lymphocytes into
CC inflammation sites. MCP-1 has been implicated in allergic and chronic
CC inflammatory diseases e.g. arthritis, arteriosclerosis and several lung
CC diseases. The analogue competes more effectively with MCP-1 for binding
CC MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably
CC providing 50% inhibition of binding at a 25:1 ratio or less, compared
CC with 75:1 for prior art mutant 7ND.
SQ Sequence 69 AA;

Query Match 91.8%; Score 89; DB 24; Length 69;
Best Local Similarity 83.3%; Pred. No. 6.04e-02;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 43 eicadpkqkvwq 54
QY 1 DICADPKKKWVQ 12

RESULT 13
ID R87677 standard; protein; 76 AA.
AC R87677;
DE 21-FEB-1996 (first entry)
DE (3-Ala) MCP-1.
KW monocyte chemoattractant protein; MCP-1; mutant; restenosis;
KW angioplasty.
OS Homo sapiens.
PN CA2152141-A.
PD 20-DEC-1996.
PF 19-JUN-1995; 152141.
PR 19-JUN-1995; CA-152141.
PA (LEWIS/) LEWIS I.
PI Gong J, Lewis I;
DR WPI; 97-165844/16.
PT N-terminally truncated monocyte chemoattractant protein-1 (MCP-1) -
PT lacks MCP-1 activity and inhibits receptor binding, useful as
PT anti-inflammatory agent
PS Claim 5; Page 5; 27pp; English.
CC The present sequence represents an analogue, MCP-1 (8-76), of monocyte
CC chemoattractant protein-1 (MCP-1). The analogue, which lacks the
CC N-terminal amino acids 1-7 of MCP-1, acts as an antagonist of MCP-1
CC as it lacks MCP-1 biological activity and inhibits binding to a MCP-1
CC receptor. The analogue is useful as an anti-inflammatory agent to block
CC the effects of MCP-1 which is an inflammatory mediator causing migration
CC of monocytes and other cells e.g. basophils and lymphocytes into
CC inflammation sites. MCP-1 has been implicated in allergic and chronic
CC inflammatory diseases e.g. arthritis, arteriosclerosis and several lung
CC diseases. The analogue competes more effectively with MCP-1 for binding
CC MCP-1 receptors than prior art mutant versions of MCP-1 e.g. preferably
CC providing 50% inhibition of binding at a 25:1 ratio or less, compared
CC with 75:1 for prior art mutant 7ND.
SQ Sequence 69 AA;

Query Match 91.8%; Score 89; DB 24; Length 69;
Best Local Similarity 83.3%; Pred. No. 6.04e-02;
Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 43 eicadpkqkvwq 54
QY 1 DICADPKKKWVQ 12

RESULT 14
ID W09374 standard; Protein; 76 AA.
AC W09374;
DE 21-MAR-1997 (first entry)
DE Monocyte chemoattractant protein 1.
KW Human; monocyte chemoattractant protein; antisenese; inhibition;
KW mononuclear cell; lymphocyte; macrophage; smooth muscle cell;

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PS Claim 1; Column 27; 21pp; English.
 CC The present sequence represents a monocyte chemoattractant peptide (MCP)
 CC designated GDCF-2. MCPs can be isolated from human glioma cell line
 CC U-105MG (e.g. present sequence) and peripheral blood mononuclear
 CC leukocytes. MCPs are used for the treatment of neoplasms and infections
 CC in humans. Short peptides derived from MCPs can be screened to identify
 CC those that can bind to the monocyte receptor without stimulating a
 CC chemotactic response. These are potentially useful for treating a
 CC inflammation associated with monocyte infiltration.
 SQ Sequence 76 AA;

Query Match 91.8%; Score 89; DB 30; Length 76;
 Best Local Similarity 83.3%; Pred. No. 6.04e-02;
 Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 50 eicadpkqkvwq 61
 QY 1 DICADPKKKWVQ 12

RESULT 13
 ID R87677 standard; protein; 76 AA.
 AC R87677;
 DE 21-FEB-1996 (first entry)
 DE (3-Ala) MCP-1.
 KW monocyte chemoattractant protein; MCP-1; mutant; restenosis;
 KW angioplasty.
 OS Homo sapiens.
 PN CA2152141-A.
 PD 20-DEC-1996.
 PF 19-JUN-1995; 152141.
 PR 12-NOV-1993; US-152301.
 PA (DAND) DANA FARMER CANCER INST INC.
 PI Rollins B, Zhang YJ;
 DR WPI; 95-215051/28.
 PT Human monocyte chemo-attractant protein-1 (MCP-1) derivs. - are
 PT capable of inhibiting the monocyte chemo-attractant activity of
 PT endogenous MCP-1 and can be used to treat restenosis
 PS Claim 6; Page 11; 22pp; English.
 CC Monocyte chemoattractant protein-1 (MCP-1) derivatives are mutated such
 CC that they inhibit the monocyte chemoattractant activity of endogenous
 CC MCP-1, provided that the derivative has not been modified by the
 CC substitution of 28-Tyr by Leu and/or 30-Arg by Val. Preferred mutations
 CC are: (1) substitution of 28 Tyr by aspartate; (2) substitution of 24 Arg
 CC by Phe; (3) substitution of 3-Asp by Ala; and/or (4) deletion of amino
 CC acids 2-8. The present sequence is a specifically claimed human MCP-1
 CC derivative based on the parent protein disclosed in Rollins, Molecular
 CC and Cellular Biology, Vol. 9, No. 11, pp. 4687-4695, Nov. 1989.
 CC The peptides can be used to prevent restenosis, e.g. in patients
 CC undergoing coronary artery angioplasty.
 SQ Sequence 76 AA;

Query Match 91.8%; Score 89; DB 14; Length 76;
 Best Local Similarity 83.3%; Pred. No. 6.04e-02;
 Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 50 eicadpkqkvwq 61
 QY 1 DICADPKKKWVQ 12

RESULT 14
 ID W09374 standard; Protein; 76 AA.
 AC W09374;
 DE 21-MAR-1997 (first entry)
 DE Monocyte chemoattractant protein 1.
 KW Human; monocyte chemoattractant protein; antisenese; inhibition;
 KW mononuclear cell; lymphocyte; macrophage; smooth muscle cell;

KW vascular restenosis.
 OS Homo sapiens. Location/Qualifiers
 FT misc_difference 1 /note= "encoded by codon CAG"
 FT misc_difference 51 /note= "encoded by codon AUG"
 FT misc_difference 65 /note= "encoded by codon CAC"
 FT US5571713-A.
 PD 05-NOV-1996.
 PF 22-OCT-1992; 965678.
 PR 22-OCT-1992; US-965678.
 PR 27-MAY-1994; US-250958.
 PA (UNMI) UNIV MICHIGAN.
 PI Kunkel SL, Lyle LR, Strieter RM;
 DR WPI; 96-505405/50.
 DR N-PSDB; T48092.
 PT Anti-sense Monocyte Chemotactic Protein-1 oligonucleotide(s) -
 PT useful for therapy or diagnosis of restenosis, etc.
 PS Disclosure; Column 13-14; 16pp; English.
 CC This is the amino acid sequence of the human monocyte chemoattractant
 CC protein (MCP)-1, a member of the C-C chemokine family. MCP-1 is a potent
 CC stimulator of monocyte chemotaxis and is produced by injured vascular
 CC smooth cells thus attracting monocytes and macrophages which infiltrate
 CC the injured area and release growth factor. This causes proliferation of
 CC the vascular smooth cells resulting in restenosis. The gene sequence can
 CC be used to generate antisense sequences e.g. T48093-7, which can be used
 CC to inhibit in vitro MCP-1 prodn. by mononuclear cells e.g. lymphocytes or
 CC macrophages, or smooth muscle cells, esp. in order to prevent vascular
 CC restenosis.
 SQ Sequence 76 AA;

Query Match 91.8%; Score 89; DB 20; Length 76;
 Best Local Similarity 83.3%; Pred. No. 6.04e-02;
 Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 50 eicadpkqkvwq 61
 QY :|||||
 1 DICADPKKKWQ 12

RESULT 15
 ID R87676 standard; protein: 76 AA.
 AC R87676;
 DT 21-FEB-1996 (first entry)
 DE (24-Arg) MCP-1.
 KW monocyte chemoattractant protein; MCP-1; mutant; restenosis;
 KW angioplasty.
 OS Homo sapiens. Location/Qualifiers
 FH Key modified_site 24 /note= "Arg in the native sequence is replaced by Phe"
 FT disulfide_bond 11..36
 FT disulfide_bond 12..52
 FN W09513295-Al.
 PD 18-MAY-1995.
 PF 07-NOV-1994; U12874.
 PR 12-NOV-1993; US-152301.
 PA (DAND) DANA FARBER CANCER INST INC.
 PI Rollins B, Zhang YJ;
 DR WPI; 95-215051/28.
 PT Human monocyte chemo-attractant protein-1 (MCP-1) derivs. - are
 PT capable of inhibiting the monocyte chemo-attractant activity of
 PT endogenous MCP-1 and can be used to treat restenosis
 PS Claim 5; Page 11; 22pp; English.
 CC Monocyte chemoattractant protein-1 (MCP-1) derivatives are mutated such
 CC that they inhibit the monocyte chemoattractant activity of endogenous
 CC MCP-1, provided that the derivative has not been modified by the
 CC substitution of 28-Tyr by Leu and/or 30-Arg by Val. Preferred mutations
 CC are: (1) substitution of 28 Tyr by aspartate; (2) substitution of 24 Arg
 CC by Phe; (3) substitution of 3-Asp by Ala; and/or (4) deletion of amino
 CC acids 2-8. The present sequence is a specifically claimed human MCP-1

CC derivative based on the parent protein disclosed in Rollins, Molecular
 CC and Cellular Biology, Vol. 9, No. 11, pp. 4687-4695, Nov. 1989.
 CC The peptides can be used to prevent restenosis, e.g. in patients
 CC undergoing coronary artery angioplasty.
 SQ Sequence 76 AA;

Query Match 91.8%; Score 89; DB 14; Length 76;
 Best Local Similarity 83.3%; Pred. No. 6.04e-02;
 Matches 10; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 50 eicadpkqkvwq 61
 QY :|||||
 1 DICADPKKKWQ 12

Search completed: Fri Feb 4 17:56:04 2000
 Job time : 18 secs.

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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm
Run on: Fri Feb 4 18:03:08 2000; MasPar time 2.53 Seconds
Tabular output not generated. 134.084 Million cell updates/sec

Title: >US-09-150-813-72
Description: (1-12) from US09150813.pep
Perfect Score: 82
Sequence: 1 KACLNPA5PIVK 12

Scoring table: PAM 150
Gap 15

Searched: 77977 seqs, 28268293 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: swiss-prot37
1:swissprot

Statistics: Mean 23.824; Variance 25.490; scale 0.935

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description	Pred. No.
1	82	100.0	107	1	GRO_HUMAN	GROWTH REGULATED PROTE	5.72e-09
2	77	93.9	107	1	M12A_HUMAN	MACROPHAGE INFLAMMATOR	1.65e-07
3	70	85.4	107	1	M12B_HUMAN	MACROPHAGE INFLAMMATOR	1.57e-05
4	65	79.3	104	1	GRO2_RABIT	GROWTH REGULATED PROTE	3.59e-04
5	64	78.0	98	1	GROB_BOVIN	GROWTH REGULATED PROTE	6.63e-04
6	62	75.6	104	1	GROB_BOVIN	GROWTH REGULATED PROTE	2.23e-03
7	62	75.6	104	1	GROB_BOVIN	GROWTH REGULATED PROTE	2.23e-03
8	59	72.0	132	1	LIX_MOUSE	CYTOKINE LIX PRECURSOR	1.32e-02
9	58	70.7	100	1	MIP2_MOUSE	MACROPHAGE INFLAMMATOR	2.35e-02
10	57	69.5	101	1	GRO_CRIGR	GROWTH REGULATED PROTE	4.18e-02
11	57	69.5	119	1	PF4L_PIG	PLATELET BASIC PROTEIN	4.18e-02
12	57	69.5	128	1	PF4L_HUMAN	PLATELET BASIC PROTEIN	4.18e-02
13	56	68.3	75	1	GCP2_BOVIN	GRANULOCYTE CHEMOTACTI	7.39e-02
14	56	68.3	130	1	LIX_RAT	CYTOKINE LIX PRECURSOR	7.39e-02
15	56	68.3	543	1	CPIB_RAT	CYTOKINE P450 1B1 (E	7.39e-02
16	55	67.1	71	1	GRO1_RABIT	PERMEABILITY FACTOR 2	1.30e-01
17	55	67.1	96	1	GRO1_RAT	GROWTH REGULATED PROTE	1.30e-01
18	55	67.1	96	1	GRO_MOUSE	GROWTH REGULATED PROTE	1.30e-01
19	55	67.1	104	1	GRO_CAVPO	GROWTH REGULATED PROTE	1.30e-01
20	53	64.6	100	1	MIP2_RAT	MACROPHAGE INFLAMMATOR	3.92e-01
21	53	64.6	117	1	AMC2_PIG	ALVEOLAR MACROPHAGE CH	3.92e-01
22	51	62.2	98	1	INIG_RAT	MOB-1 PROTEIN PRECURSO	1.15e-00
23	51	62.2	114	1	EN78_HUMAN	NEUTROPHIL ACTIVATING	1.15e-00

RESULT 1
ID GRO_HUMAN STANDARD; PRT; 107 AA.
AC P09341;
DT 01-MAR-1989 (REL. 10, CREATED)
DT 01-MAR-1989 (REL. 10, LAST SEQUENCE UPDATE)
DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
DE GROWTH REGULATED PROTEIN PRECURSOR (MELANOMA GROWTH STIMULATORY
DE ACTIVITY) (MGSA) (NEUTROPHIL-ACTIVATING PROTEIN 3) (NAP-3).
GN GRO1 OR GROA OR GRO OR MGSA.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 88041072.
RA ANISOWICZ A., BARDEWELL L., SAGER R.;
RT "Constitutive overexpression of a growth-regulated gene in
RT transformed Chinese hamster and human cells";
RL PROC. NATL. ACAD. SCI. U.S.A. 84:7188-7192(1987).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE; 88328991.
RA RICHMOND A., BALENTIEN E., THOMAS H.G., FLAGGS G., BARTON D.E.,
RA SPIESS J., BORDONI R., FRANCKE U., DERYNCK R.;
RT "Molecular characterization and chromosomal mapping of melanoma
RT growth stimulatory activity, a growth factor structurally related to
RL beta-thromboglobulin";
RN EMBO J. 7:2025-2033(1988).
RP SEQUENCE FROM N.A.
RX MEDLINE; 91057157.
RA BAKER N.E., KUCERA G., RICHMOND A.;
RT "Nucleotide sequence of the human melanoma growth stimulatory
RT activity (MGSA) gene";
RL NUCLEIC ACIDS RES. 18:6453-6453(1990).
RN [4]
RP SEQUENCE OF 35-65.
RX MEDLINE; 90217938.
RA SCHROEDER J.-M., PERSSON N.L.M., CHRISTOPHERS E.;
RT "Lipopolysaccharide-stimulated human monocytes secrete, apart from
RT neutrophil-activating peptide 1/interleukin 8, a second neutrophil-
RT activating protein, NH2-terminal amino acid sequence identity with
RL melanoma growth stimulatory activity";
RL J. EXP. MED. 171:1091-1100(1990).
RN [5]
RP SEQUENCE OF 35-57.

ALIGNMENTS

1 GCP2_HUMAN 114 62.2 51 24
MIG_HUMAN 125 62.2 51 25
MURC_BUCAP 483 62.2 51 26
INTERFERON-GAMMA INDUC 1.15e+00
UDP-N-ACETYLURAMATE-- 1.15e+00
INTERFERON-GAMMA INDUC 1.95e+00
GAMMA INTERFERON INDUC 1.95e+00
VITAMIN D-BINDING PROT 1.95e+00
1,4-ALPHA-GLUCAN BRANC 1.95e+00
3-HYDROXY-3-METHYLGLUT 1.95e+00
NEGATIVE REGULATOR OF 1.95e+00
TUBULIN ALPHA CHAIN (F 3.28e+00
TUBULIN ALPHA CHAIN. 3.28e+00
TUBULIN ALPHA-2 CHAIN. 3.28e+00
TUBULIN ALPHA-3 CHAIN. 3.28e+00
TUBULIN ALPHA CHAIN, T 3.28e+00
TUBULIN ALPHA-3 AND AL 3.28e+00
TUBULIN ALPHA CHAIN. 3.28e+00
TUBULIN ALPHA-2 CHAIN. 3.28e+00
TUBULIN ALPHA CHAIN (A 3.28e+00
HYPOTHETICAL 52.9 KD P 3.28e+00
GAG POLYPROTEIN [CONTA 3.28e+00
GAG POLYPROTEIN [CONTA 3.28e+00

RA MEDLINE: 89246368.
RA GOLDS E.E., MASON P., NYIRKOS P.;
RT "Inflammatory cytokines induce synthesis and secretion of gro protein
RT and a neutrophil chemotactic factor but not beta 2-microglobulin in
RT human synovial cells and fibroblasts";
RL BIOCHEM. J. 259:585-588(1989).
RN [16]
RP POSSIBLE FUNCTION.
RX MEDLINE: 89356650.
RA WEN D., ROWLAND A., DERYNCK R.;
RT "Expression and secretion of gro/MGSA by stimulated human endothelial
RT cells";
RL EMBO J. 8:1761-1766(1989).
RN [7]
RP STRUCTURE BY NMR.
RX MEDLINE: 93387459.
RA FAIRBROTHER W.J., REILLY D., COLBY T., HORUK R.;
RT "1H assignment and secondary structure determination of human
RT melanoma growth stimulating activity (MGSA) by NMR spectroscopy";
RL FEBS LETT. 330:302-306(1993).
RN [8]
RP STRUCTURE BY NMR.
RX MEDLINE: 94376296.
RA FAIRBROTHER W.J., REILLY D., COLBY T., HESSELGESSER J., HORUK R.;
RT "The solution structure of melanoma growth stimulating activity";
RL J. MOL. BIOL. 242:252-270(1994).
RN [9]
RP STRUCTURE BY NMR.
RX MEDLINE: 95105175.
RA KIM K.S., CLARK-LEWIS I., SYKES B.D.;
RT "Solution structure of GRO/melanoma growth stimulatory activity
RT determined by 1H NMR spectroscopy";
RL J. BIOL. CHEM. 269:32909-32915(1994).
CC -!- FUNCTION: HAS CHEMOTACTIC ACTIVITY FOR NEUTROPHILS. MAY PLAY A
CC ROLE IN INFLAMMATION AND EXERTS ITS EFFECTS ON ENDOTHELIAL CELLS
CC IN AN AUTOCRINE FASHION.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CX-C).
CC
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CC
DR EMBL: J03561; G306806; -
DR EMBL: X12510; G34622; -
DR EMBL: X34489; G34626; -
DR PIR: A28414; A28414.
DR PIR: S00983; S00983.
DR PIR: S03976; S03976.
DR PIR: S13669; S13669.
DR PDB: 1MGS; 30-SEP-94.
DR PDB: 1MSG; 31-MAR-95.
DR PDB: 1MSH; 31-MAR-95.
DR PDB: 155730; -
DR MIM: 155730; -
DR PROSITE: PS00471; SMALL_CYTOKINES_CXC; 1.
DR PFAM: PF00048; i18; 1.
DR CYTOKINE: GROWTH FACTOR; INFLAMMATORY RESPONSE; SIGNAL; 3D-STRUCTURE.
KW SIGNAL 1 34
FT CHAIN 35 107 GRO PROTEIN.
FT DISULFID 43 69
FT DISULFID 45 85
SQ SEQUENCE 107 AA; 11301 MW; 4DEE921B CRC32;

Query Match 100.0%; Score 82; DB 1; Length 107;
Best Local Similarity 100.0%; Pred. No. 5.72e-09;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Db 83 KACLNPA5PIVK 94
|||||||

QY 1 KACLNPA5PIVK 12
RESULT 2
ID MIZA_HUMAN STANDARD; PRT; 107 AA.
AC P19875;
DT 01-FEB-1991 (REL. 17, CREATED)
DT 01-FEB-1991 (REL. 17, LAST SEQUENCE UPDATE)
DT 01-JUN-1994 (REL. 29, LAST ANNOTATION UPDATE)
DE MACROPHAGE INFLAMMATORY PROTEIN-2-ALPHA PRECURSOR (MIP2-ALPHA) (GROWTH
DE REGULATED PROTEIN BETA) (GRO-BETA).
GN GRO2 OR GROB OR MIP2A.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-HISTIOCYTIC LYMPHOMA;
RX MEDLINE: 90354792.
RA TEKAMP-OLSON P., GALLEGOS C., BAUER D., MCCLAIN J., SHERRY B.,
RA FABRE M., VAN DEVENTER S., CERAMI A.;
RT "Cloning and characterization of cDNAs for murine macrophage
RT inflammatory protein 2 and its human homologues";
RL J. EXP. MED. 172:911-919(1990).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE: 90377259.
RA IIDA N., GROTEENDORST G.R.;
RT "Cloning and sequencing of a new gro transcript from activated human
RT monocytes: expression in leukocytes and wound tissue";
RL MOL. CELL. BIOL. 10:5596-5599(1990).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE: 91017578.
RA HASKILL S., PEACE A., MORRIS J., SPORN S.A., ANISOWICZ A., LEE S.W.,
RA SMITH T., MARTIN G., RALPH P., SAGER R.;
RT "Identification of three related human GRO genes encoding cytokine
RT functions";
RL PROC. NATL. ACAD. SCI. U.S.A. 87:7732-7736(1990).
CC -!- FUNCTION: PRODUCED BY ACTIVATED MONOCYTES AND NEUTROPHILS AND
CC EXPRESSED AT SITES OF INFLAMMATION.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CX-C).
CC
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CC
DR EMBL: X53799; G34659; -
DR EMBL: M36820; G183629; -
DR EMBL: M57731; G183627; -
DR PIR: JH0281; JH0281.
DR MIM: 139110; -
DR PROSITE: PS00471; SMALL_CYTOKINES_CXC; 1.
DR PFAM: PF00048; i18; 1.
DR HSSP: P09341; 1MGS.
KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
FT SIGNAL 1 34
FT CHAIN 35 107 MACROPHAGE INFLAMMATORY PROTEIN
FT DISULFID 43 69 2-ALPHA.
FT DISULFID 45 85 BY SIMILARITY.
FT DISULFID 45 85 BY SIMILARITY.
SQ SEQUENCE 107 AA; 11389 MW; 6E431A15 CRC32;

Query Match 93.9%; Score 77; DB 1; Length 107;
Best Local Similarity 91.7%; Pred. No. 1.65e-07;
Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 83 KACLNPA5PIVK 94
|||||||

ID	AC	P47854;				GRO2_RABIT	STANDARD;	PRT;	104 AA.
DT	01-FEB-1996	(REL. 33, CREATED)							
DT	01-FEB-1996	(REL. 33, LAST SEQUENCE UPDATE)							
DT	01-FEB-1996	(REL. 33, LAST ANNOTATION UPDATE)							
DE	GROWTH REGULATED PROTEIN HOMOLOG PRECURSOR (GRO-HOMOLOG).								
OS	EUKARYOTUS CUNICULUS (RABBIT).								
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;								
OC	LAGOMORPHA; LEPORIDAE; ORYCTOLAGUS.								
RN	[1]								
RP	SEQUENCE FROM N.A.								
RA	SCHWARTZ D., CHAVERRI-ALAMADA L., BERLINER J., KIRCHGESNER T.,								
RA	QUISOMORO D., FANG J., TERAMP-OLSON P., LUISIS J., FOGELMAN A.,								
RA	TERRITO M.;								
RL	SUBMITTED (JUL-1994) TO EMBL/GENBANK/DBJ DATA BANKS.								
CC	-!- FUNCTION: PLAYS A ROLE IN MONOCYTE ADHESION TO THE ENDOTHELIUM.								
CC	-!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE								
CC	C-X-C) (CHEMOKINE CXCL).								
CC									
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CC	or send an email to license@isb-sib.ch).								
CC									
DR	EMBL; U12310; G520743; -								
DR	PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.								
DR	PFAM; PF00048; i18; 1.								
DR	HSP; P09341; IMGS.								
KW	CYTOKINE; GROWTH FACTOR; INFLAMMATORY RESPONSE; SIGNAL.								
FT	SIGNAL 1 31 PROBABLE.								
FT	CHAIN 32 104 GROWTH REGULATED PROTEIN HOMOLOG.								
FT	DISULFID 40 66 BY SIMILARITY.								
FT	DISULFID 42 82 BY SIMILARITY.								
SQ	SEQUENCE 104 AA; 10900 MW; C75AEF07 CRC32;								
	Query Match 79.3%; Score 65; DB 1; Length 104;								
	Best Local Similarity 70.0%; Pred. No. 3.59e-04;								
	Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;								
Db	82 CLNPAPVVK 91								
	::								
Qy	3 CLNPASPIVK 12								
RESULT	5								
ID	GROG_BOVIN	STANDARD;	PRT;	98 AA.					
AC	O46675;								
DT	15-DEC-1998 (REL. 37, CREATED)								
DT	15-DEC-1998 (REL. 37, LAST SEQUENCE UPDATE)								
DT	15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)								
DE	GROWTH REGULATED PROTEIN HOMOLOG GAMMA PRECURSOR (GRO-GAMMA).								
OS	BOS TAURUS (BOVINE).								
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;								
OC	ARTIODACTYLIA; RUMINANTIA; PECORA; BOVIDAE; BOVINAE; BOS.								
RN	[1]								
RP	SEQUENCE FROM N.A.								
RA	YOSHIMURA T., MODI W.S.;								
RL	SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.								
CC	-!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE								
CC	C-X-C) (CHEMOKINE CXCL).								
CC									
CC	This SWISS-PROT entry is copyright. It is produced through a collaboration								
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DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
KW CYTOKINE; GROWTH FACTOR; INFLAMMATORY RESPONSE; SIGNAL.
FT SIGNAL 1 29 POTENTIAL.
FT CHAIN 30 98 GROWTH REGULATED PROTEIN HOMOLOG GAMMA.
FT DISULFID 39 65 BY SIMILARITY.
FT DISULFID 41 81 BY SIMILARITY.
SQ SEQUENCE 98 AA; 10393 MW; ECC2B4C CRC32;

. Query Match 78.0%; Score 64; DB 1; Length 98;
Best Local Similarity 80.0%; Pred. No. 6.63e-04;
Matches 8; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 81 CLNPAAPVVK 90
   |||||:|:|
QY 3 CLNPASPIVK 12

RESULT 6
ID GROA_BOVIN STANDARD; PRT; 104 AA.
AC O46676;
DT 15-DEC-1998 (REL. 37, CREATED)
DT 15-DEC-1998 (REL. 37, LAST SEQUENCE UPDATE)
DE GROWTH REGULATED PROTEIN HOMOLOG ALPHA PRECURSOR (GRO-ALPHA).
OS BOS TAURUS (BOVINE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC ARTIODACTYLA; RUMINANTIA; PECORA; BOVOIDEA; BOVINAE; BOS.
RN [1]
RP SEQUENCE FROM N.A.
RA YOSHIMURA T., MODI W.S.;
RL SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
C-X-C) (CHEMOKINE CXC).
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CC
CC EMBL; U95812; G2735495;
DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
KW CYTOKINE; GROWTH FACTOR; INFLAMMATORY RESPONSE; SIGNAL.
FT SIGNAL 1 30 POTENTIAL.
FT CHAIN 31 104 GROWTH REGULATED PROTEIN HOMOLOG ALPHA.
FT DISULFID 40 66 BY SIMILARITY.
FT DISULFID 42 82 BY SIMILARITY.
SQ SEQUENCE 104 AA; 10984 MW; CCFD567E CRC32;

Query Match 75.6%; Score 62; DB 1; Length 104;
Best Local Similarity 70.0%; Pred. No. 2.23e-03;
Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 82 CLNTPAPVVK 91
   |||||:|:|
QY 3 CLNPASPIVK 12

RESULT 7
ID GROB_BOVIN STANDARD; PRT; 104 AA.
AC O46677;
DT 15-DEC-1998 (REL. 37, CREATED)
DT 15-DEC-1998 (REL. 37, LAST SEQUENCE UPDATE)
DE GROWTH REGULATED PROTEIN HOMOLOG BETA PRECURSOR (GRO-BETA).
OS BOS TAURUS (BOVINE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC ARTIODACTYLA; RUMINANTIA; PECORA; BOVOIDEA; BOVINAE; BOS.
RN [1]
RP SEQUENCE FROM N.A.
RA YOSHIMURA T., MODI W.S.;
RL SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
C-X-C) (CHEMOKINE CXC).
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CC
CC EMBL; U95812; G2735495;
DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
KW CYTOKINE; GROWTH FACTOR; INFLAMMATORY RESPONSE; SIGNAL.
FT SIGNAL 1 30 POTENTIAL.
FT CHAIN 31 104 GROWTH REGULATED PROTEIN HOMOLOG ALPHA.
FT DISULFID 40 66 BY SIMILARITY.
FT DISULFID 42 82 BY SIMILARITY.
SQ SEQUENCE 104 AA; 10984 MW; CCFD567E CRC32;

Query Match 75.6%; Score 62; DB 1; Length 104;
Best Local Similarity 70.0%; Pred. No. 2.23e-03;
Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 82 CLNTPAPVVK 91
   |||||:|:|
QY 3 CLNPASPIVK 12

RESULT 8
ID LIX_MOUSE STANDARD; PRT; 132 AA.
AC P50228;
DT 01-OCT-1996 (REL. 34, CREATED)
DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
DE CYTOKINE LIX PRECURSOR.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 95348101.
RA SMITH J.B., HERSCHMAN H.R.;
RT "Glucocorticoid-attenuated response genes encode intercellular
mediators, including a new C-X-C chemokine.";
RL J. BIOL. CHEM. 270:16756-16765(1995).
CC -!- FUNCTION: MAY PARTICIPATE IN THE RECRUITMENT OF INFLAMMATORY CELLS
BY INJURED OR INFECTED TISSUE.
CC -!- INDUCTION: BY LIPOPOLYSACCHARIDE (LPS).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
C-X-C) (CHEMOKINE CXC).
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CC
CC EMBL; U27267; G950159;
MGD; MGI:1096866; SCYB5.
DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
DR PFAM; PF00048; i18; 1.
DR HSSP; P02775; iNAP.
KW CYTOKINE; SIGNAL.
FT SIGNAL 1 40 POTENTIAL.
FT CHAIN 41 132 CYTOKINE LIX.
FT DISULFID 53 79 BY SIMILARITY.
FT DISULFID 55 95 BY SIMILARITY.
SQ SEQUENCE 132 AA; 14190 MW; 58C45B6B CRC32;
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RL SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
C-X-C) (CHEMOKINE CXC).
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CC
CC EMBL; U95813; G2735497;
DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
KW CYTOKINE; GROWTH FACTOR; INFLAMMATORY RESPONSE; SIGNAL.
FT SIGNAL 1 30 POTENTIAL.
FT CHAIN 31 104 GROWTH REGULATED PROTEIN HOMOLOG BETA.
FT DISULFID 40 66 BY SIMILARITY.
FT DISULFID 42 82 BY SIMILARITY.
SQ SEQUENCE 104 AA; 10950 MW; 2C63B23D CRC32;

Query Match 75.6%; Score 62; DB 1; Length 104;
Best Local Similarity 70.0%; Pred. No. 2.23e-03;
Matches 7; Conservative 3; Mismatches 0; Indels 0; Gaps 0;

Db 82 CLNTPAPVVK 91
   |||||:|:|
QY 3 CLNPASPIVK 12

RESULT 8
ID LIX_MOUSE STANDARD; PRT; 132 AA.
AC P50228;
DT 01-OCT-1996 (REL. 34, CREATED)
DT 01-OCT-1996 (REL. 34, LAST SEQUENCE UPDATE)
DE CYTOKINE LIX PRECURSOR.
OS MUS MUSCULUS (MOUSE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; MUS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 95348101.
RA SMITH J.B., HERSCHMAN H.R.;
RT "Glucocorticoid-attenuated response genes encode intercellular
mediators, including a new C-X-C chemokine.";
RL J. BIOL. CHEM. 270:16756-16765(1995).
CC -!- FUNCTION: MAY PARTICIPATE IN THE RECRUITMENT OF INFLAMMATORY CELLS
BY INJURED OR INFECTED TISSUE.
CC -!- INDUCTION: BY LIPOPOLYSACCHARIDE (LPS).
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
C-X-C) (CHEMOKINE CXC).
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CC
CC EMBL; U27267; G950159;
MGD; MGI:1096866; SCYB5.
DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
DR PFAM; PF00048; i18; 1.
DR HSSP; P02775; iNAP.
KW CYTOKINE; SIGNAL.
FT SIGNAL 1 40 POTENTIAL.
FT CHAIN 41 132 CYTOKINE LIX.
FT DISULFID 53 79 BY SIMILARITY.
FT DISULFID 55 95 BY SIMILARITY.
SQ SEQUENCE 132 AA; 14190 MW; 58C45B6B CRC32;
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Query Match 72.0%; Score 59; DB 1; Length 132;
 Best Local Similarity 50.0%; Pred. No. 1.32e-02;
 Matches 5; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 95 CLDPEAPV 104
 QY 3 CLNPASPIV 12

RESULT 9
 ID MIP2 MOUSE STANDARD; PRT; 100 AA.
 AC P10889;
 DT 01-JUL-1989 (REL. 11, CREATED)
 DT 01-FEB-1991 (REL. 17, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DE MACROPHAGE INFLAMMATORY PROTEIN 2 PRECURSOR (MIP2).
 GN MIP2 OR MIP-2.
 OS MUS MUSCULUS (MOUSE).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC RODENTIA; SCIUROGNATHI; MURIDAE; MORINAE; MUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 90354792.
 RA TEKAMP-OLSON P., GALLEGOS C., BAUER D., MCCLAIN J., SHERRY B.,
 RA FABRE M., VAN DEVENTER S., CERAMI A.;
 RT "Cloning and characterization of cDNAs for murine macrophage
 RT inflammatory protein 2 and its human homologues.";
 RL J. EXP. MED. 172:911-919(1990).
 RN [2]
 RP SEQUENCE OF 28-59.
 RX MEDLINE; 89098980.
 RA WOLPE S.D., SHERRY B., JUERS D., DAVATELIS G., YURT R.W., CERAMI A.;
 RT "Identification and characterization of macrophage inflammatory
 RT protein 2.";
 RL PROC. NATL. ACAD. SCI. U.S.A. 86:612-616(1989).
 RN [3]
 RP STRUCTURE BY NMR.
 RX MEDLINE; 98285558.
 RA SHAO W., JERVA L.F., WEST J., LOLLIS E., SCHWEITZER B.I.;
 RT "Solution structure of murine macrophage inflammatory protein-2.";
 RL BIOCHEMISTRY 37:8303-8313(1998).
 CC -!- FUNCTION: CHEMOTACTIC FOR HUMAN POLYMORPHONUCLEAR LEUKOCYTES BUT
 CC DOES NOT INDUCE CHEMOKINESIS OR AN OXIDATIVE BURST.
 CC -!- SUBUNIT: HOMOTETRAMER.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).
 CC -----
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 CC -----
 CC EMBL; X53798; G53129; -.
 DR PIR; JH0200; JH0200.
 DR PDB; 1MI2; 29-APR-98.
 DR MGI; 96991; MIP2.
 DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 DR PFAM; PF00048; i18; 1.
 KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL; 3D-STRUCTURE.
 FT SIGNAL 1 27
 FT CHAIN 28 100 MACROPHAGE INFLAMMATORY PROTEIN 2.
 FT DISULFID 36 62
 FT DISULFID 38 78
 SQ SEQUENCE 100 AA; 10621 MW; 333AC6A4 CRC32;

Query Match 70.7%; Score 58; DB 1; Length 100;
 Best Local Similarity 54.5%; Pred. No. 2.35e-02;
 Matches 6; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 76 KVCULDPEAPLV 86
 QY 1 KACLNPAPIV 11

RESULT 10
 ID GRO-ORIGR STANDARD; PRT; 101 AA.
 AC P09340;
 DT 01-MAR-1989 (REL. 10, CREATED)
 DT 01-MAR-1989 (REL. 10, LAST SEQUENCE UPDATE)
 DT 01-DEC-1992 (REL. 24, LAST ANNOTATION UPDATE)
 DE GROWTH REGULATED PROTEIN PRECURSOR.
 GN GRO.
 OS CRICETULUS GRISEUS (CHINESE HAMSTER).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC RODENTIA; SCIUROGNATHI; MURIDAE; CRICETINAE; CRICETULUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 88041072.
 RA ANISOWICZ A., BARDWELL L., SAGER R.;
 RT "Constitutive overexpression of a growth-regulated gene in
 RT transformed Chinese hamster and human cells.";
 RL PROC. NATL. ACAD. SCI. U.S.A. 84:7188-7192(1987).
 CC -!- FUNCTION: HAS CHEMOTACTIC ACTIVITY FOR NEUTROPHILS.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).
 CC -----
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 CC -----
 CC EMBL; J03560; G304509; -.
 DR PIR; B28414; B28414.
 DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSSP; P10889; 1MI2.
 KW CYTOKINE; GROWTH FACTOR; INFLAMMATORY RESPONSE; SIGNAL.
 FT SIGNAL 1 28
 FT CHAIN 29 101 GRO PROTEIN.
 FT DISULFID 37 63 BY SIMILARITY.
 FT DISULFID 39 79 BY SIMILARITY.
 SQ SEQUENCE 101 AA; 10893 MW; 3F83AD41 CRC32;

Query Match 69.5%; Score 57; DB 1; Length 101;
 Best Local Similarity 70.0%; Pred. No. 4.18e-02;
 Matches 7; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 78 ACLNPEAPMV 87
 QY 2 ACLNPAPIV 11

RESULT 11
 ID PF4L_PIG STANDARD; PRT; 119 AA.
 AC P43030;
 DT 01-NOV-1995 (REL. 32, CREATED)
 DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
 DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
 DE PLATELET BASIC PROTEIN PRECURSOR (PBP).
 GN PBPB.
 OS SUS SCROFA (PIG).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC ARTIODACTYLA; SUIFORMES; SUINA; SUIDAE; SUS.
 RN [1]
 RP SEQUENCE FROM N.A., AND SEQUENCE OF 40-119.
 RC TISSUE=PLATELET;
 RX MEDLINE; 94229068.
 RA POKER C.A., PROUDFOOT A.E.I., MAGNENAT E., BACON K., WELLS T.N.C.;
 RT "Molecular cloning and characterisation of a neutrophil chemotactic

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RT protein from porcine platelets.";
RL EUR. J. BIOCHEM. 221:713-719(1994).
CC -!- FUNCTION: CHEMOATTRACTANT FACTOR FOR NEUTROPHILS.
CC -!- MASS SPECTROMETRY: MW=8597.5; METHOD=ELECTROSPRAY; RANGE=40-119.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CXCL).
CC -----
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CC -----
DR EMBL: X77935; G457754; -.
DR PROSITE: PS00471; SMALL_CYTOKINES_CXC; 1.
DR PFAM: PF00048; i18; 1.
DR HSSP: P02775; INAP.
KW CYTOKINE; GROWTH FACTOR; CHEMOTAXIS; MITOGEN; PLATELET; SIGNAL.
FT SIGNAL 1 33 PROBABLE.
FT PROPEP 34 39
FT CHAIN 40 119 PLATELET BASIC PROTEIN.
FT DISULFID 54 80 BY SIMILARITY.
FT DISULFID 56 96 BY SIMILARITY.
SQ SEQUENCE 119 AA; 12615 MW; 6D7F3E47 CRC32;

Query Match 69.5%; Score 57; DB 1; Length 119;
Best Local Similarity 50.0%; Pred. No. 4.18e-02;
Matches 6; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

Db 94 KICLDPEAPRIK 105
QY 1 KACLNPAPIVK 12

RESULT 12
ID PF4L_HUMAN STANDARD; PRT; 128 AA.
AC P02775;
DT 21-JUL-1986 (REL. 01, CREATED)
DT 01-NOV-1991 (REL. 20, LAST SEQUENCE UPDATE)
DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
DE PLATELET BASIC PROTEIN PRECURSOR (PBP) [CONTAINS: CONNECTIVE-TISSUE
DE ACTIVATING PEPTIDE III (CTAP-III); LOW-AFFINITY PLATELET FACTOR IV
DE (LA-PF4); BETA-THROMBOGLOBULIN (BETA-TG); NEUTROPHIL-ACTIVATING
DE PEPTIDE 2 (NAP-2)].
DE GN PBP OR CTAP3 OR TGB1 OR TBGB1.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 91170256.
RA MAJUMDAR S., GONDER D., KOUTSIS B., PONCZ M.;
RT "Characterization of the human beta-thromboglobulin gene. Comparison
RT with the gene for platelet factor 4.";
RL J. BIOL. CHEM. 266:5785-5789(1991).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE; 89229374.
RA WENGER R.H., WICKI A.N., WALZ A., KIEFFER N., CLEMETSON K.J.;
RT "Cloning of cDNA coding for connective tissue activating peptide III
RT from a human platelet-derived lambda gt10 expression library.";
RL BLOOD 73:1498-1503(1989).
RN [3]
RP SEQUENCE OF 35-53.
RX MEDLINE; 86216117.
RA HOLT J.C., HARRIS M.E., HOLT A.M., LANGE E., HENSCHEN A.,
RA NEWIAROWSKI S.;
RT "Characterization of human platelet basic protein, a precursor form
RT of low-affinity platelet factor 4 and beta-thromboglobulin.";
RL BIOCHEMISTRY 25:1988-1996(1986).
RN [4]

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RP SEQUENCE OF 44-66 AND 125-128.
RX MEDLINE; 83144010.
RA CASTOR C.W., MILLER J.W., WALZ D.A.;
RT "Structural and biological characteristics of connective tissue
RT activating peptide (CTAP-III), a major human platelet-derived growth
RT factor.";
RL PROC. NATL. ACAD. SCI. U.S.A. 80:765-769(1983).
RN [5]
RP SEQUENCE OF 48-126.
RX MEDLINE; 78187279.
RA BEGG G.S., PEPPER D.S., CHESTERMAN C.N., MORGAN F.J.;
RT "Complete covalent structure of human beta-thromboglobulin.";
RL BIOCHEMISTRY 17:1739-1744(1978).
RN [6]
RP SEQUENCE OF 59-126.
RX MEDLINE; 89193761.
RA WALZ A., BAGGIOLINI M.;
RT "A novel cleavage product of beta-thromboglobulin formed in cultures
RT of stimulated mononuclear cells activates human neutrophils.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 159:969-981(1989).
RN [7]
RP SEQUENCE OF 57-68.
RX MEDLINE; 89391960.
RA CASTOR C.W., WALZ D.A., RAGSDALE C.G., HOSSLER P.A., SMITH E.M.,
RA BIGNALL M.C., AARON B.P., MOUNTJOY K.;
RT "Connective tissue activation. XXXIII. Biologically active cleavage
RT products of CTAP-III from human platelets.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 163:1071-1078(1989).
RN [8]
RP SEQUENCE OF 59-67.
RX MEDLINE; 90155110.
RA WALZ A., BAGGIOLINI M.;
RT "Generation of the neutrophil-activating peptide NAP-2 from platelet
RT basic protein or connective tissue-activating peptide III through
RT monocyte proteases.";
RL J. EXP. MED. 171:449-454(1990).
RN [9]
RP SYNTHESIS OF 59-126.
RX MEDLINE; 91175767.
RA CLARK-LEWIS I., MOSE B., WALZ A., BAGGIOLINI M., SCOTT G.J.,
RA AEBERSOLD R.;
RT "Chemical synthesis, purification, and characterization of two
RT inflammatory proteins, neutrophil activating peptide 1
RT (interleukin-8) and neutrophil activating peptide.";
RL BIOCHEMISTRY 30:3128-3135(1991).
RN [10]
RP X-RAY CRYSTALLOGRAPHY OF 59-128.
RX MEDLINE; 94307404.
RA KUNGL A.J., MACHUS M., HUBER R., SCHWER C., LAM C., ASCHAUER H.,
RA EHN G., LINDLEY I.J.D., AUER M.;
RT "Purification, crystallization and preliminary X-ray diffraction
RT analysis of recombinant human neutrophil-activating peptide 2
RT (rhNAP-2)."
RL FEBS LETT. 347:300-303(1994).
RN [11]
RP X-RAY CRYSTALLOGRAPHY (1.9 ANGSTROMS) OF 59-128.
RX MEDLINE; 95221354.
RA MALKOWSKI M.G., WU J.Y., LAZAR J.B., JOHNSON P.H., EDWARDS B.F.P.;
RT "The crystal structure of recombinant human neutrophil-activating
RT peptide-2 (M6L) at 1.9-A resolution.";
RL J. BIOL. CHEM. 270:7077-7087(1995).
CC -!- FUNCTION: LA-PF4A STIMULATES DNA SYNTHESIS, MITOSIS, GLYCOLYSIS,
CC INTRACELLULAR CAMP ACCUMULATION, PROTAGLANDIN E2 SECRETION, AND
CC SYNTHESIS OF HYALURONIC ACID AND SULFATED GLYCOSAMINOGLYCAN. IT
CC ALSO STIMULATES THE FORMATION AND SECRETION OF PLASMINOGEN
CC CHEMOATTRACTANT AND ACTIVATOR FOR NEUTROPHILS.
CC -!- SUBUNIT: BETA-THROMBOGLOBULIN IS AN HOMOTETRAMER.
CC -!- PTM: PROTEOLYTIC REMOVAL OF RESIDUES 1-9 PRODUCES THE ACTIVE
CC PEPTIDE CONNECTIVE-TISSUE ACTIVATING PEPTIDE III (CTAP III) (LOW-
CC AFFINITY PLATELET FACTOR IV (LA-PF4)).
CC -!- PTM: PROTEOLYTIC REMOVAL OF RESIDUES 1-13 PRODUCES THE ACTIVE
CC PEPTIDE BETA-THROMBOGLOBULIN, WHICH IS RELEASED FROM PLATELETS

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CC ALONG WITH PLATELET FACTOR 4 AND PLATELET-DERIVED GROWTH FACTOR.
 CC -1- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).
 CC -----
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 CC -----
 CC EMBL: M54995; GI181176; .
 CC PIR: A39546; TGHU.
 CC PIR: A24448; A24448.
 CC PIR: A37382; A37382.
 CC PDB: 1NAP; 19-DEC-95.
 CC PDB: 1TVX; 11-JAN-97.
 CC SWISS-2DPAGE: P02775; HUMAN.
 CC MIM: 121010; .
 CC PROSITE: PS00471; SMALL_CYTOKINES_CXC; 1.
 CC PFAM: PF00048; i18; 1.
 CC CYTOKINE; CONNECTIVE TISSUE; GROWTH FACTOR; CHEMOTAXIS; MITOGEN;
 CC PLATELET; SIGNAL; 3D-STRUCTURE.
 CC FT SIGNAL 1 34
 CC FT CHAIN 35 128 PLATELET BASIC PROTEIN (PBP).
 CC FT CHAIN 44 128 LA-PF4 / CTAP-III.
 CC FT CHAIN 48 128 BETA-THROMBOGLOBULIN.
 CC FT CHAIN 59 128 NAP-2.
 CC FT CHAIN 63 89
 CC FT DISULFID 65 105
 CC FT DISULFID 65 105
 CC SEQUENCE 128 AA; 13894 MW; 15B7D1DF CRC32;
 CC
 CC Query Match 69.5%; Score 57; DB 1; Length 128;
 CC Best Local Similarity 50.0%; Pred. No. 4.18e-02;
 CC Matches 6; Conservative 3; Mismatches 3; Indels 0; Gaps 0;
 CC
 CC Db 103 KICLDPAPRIK 114
 CC | : : : : :
 CC QY 1 KACLNPASPIVK 12
 CC
 CC RESULT 13
 CC ID GCP2_BOVIN STANDARD; PRT; 75 AA.
 CC AC P80221;
 CC DT 01-FEB-1994 (REL. 28, CREATED)
 CC DT 01-FEB-1994 (REL. 28, LAST SEQUENCE UPDATE)
 CC DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 CC DE GRANULOCYTE CHEMOTACTIC PROTEIN 2 (GCP-2).
 CC GN SCYB6 OR GCP2.
 CC OS BOS TAURUS (BOVINE).
 CC OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC OC ARTIODACTYLA; RUMINANTIA; PECORA; BOVIDAE; BOVINAE; BOS.
 CC [1]
 CC RP SEQUENCE
 CC RC TISSUE-KIDNEY;
 CC RX MEDLINE; 94001982.
 CC RA PROOST P., WUYTS A., CONINGS R., LENAERTS J.-P., BILLIAU A.,
 CC RA OPDENAKKER G., VAN DAMME J.;
 CC RT "Human and bovine granulocyte chemotactic protein-2: complete amino
 CC RT acid sequence and functional characterization as chemokines";
 CC RL BIOCHEMISTRY 32:10170-10177(1993).
 CC CC -1- FUNCTION: CHEMOTACTIC FOR NEUTROPHIL GRANULOCYTES.
 CC CC -1- SUBCELLULAR LOCATION: SECRETED.
 CC CC -1- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).
 CC PIR: B54188; B54188.
 CC PROSITE: PS00471; SMALL_CYTOKINES_CXC; 1.
 CC PFAM: PF00048; i18; 1.
 CC HSSP: P02775; 1NAP.
 CC CYTOKINE; CHEMOTAXIS; HEPARIN-BINDING.
 CC VARIANT 1 2 MISSING (N-TERMINAL PROCESSING VARIANT).
 CC FT VARIANT 1 7 MISSING (N-TERMINAL PROCESSING VARIANT).

FT VARIANT 1 8 MISSING (N-TERMINAL PROCESSING VARIANT).
 FT VARIANT 1 9 MISSING (N-TERMINAL PROCESSING VARIANT).
 FT DISULFID 12 38 BY SIMILARITY.
 FT DISULFID 14 54 BY SIMILARITY.
 SQ SEQUENCE 75 AA; 7931 MW; B747167F CRC32;
 CC
 CC Query Match 68.3%; Score 56; DB 1; Length 75;
 CC Best Local Similarity 50.0%; Pred. No. 7.39e-02;
 CC Matches 5; Conservative 4; Mismatches 1; Indels 0; Gaps 0;
 CC
 CC Db 54 CLDPEAPLIK 63
 CC | : : : : :
 CC QY 3 KACLNPASPIVK 12
 CC
 CC RESULT 14
 CC ID LIX_RAT STANDARD; PRT; 130 AA.
 CC AC P97885;
 CC DT 01-NOV-1997 (REL. 35, CREATED)
 CC DT 01-NOV-1997 (REL. 35, LAST SEQUENCE UPDATE)
 CC DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 CC DE CYTOKINE LIX PRECURSOR.
 CC GN SCYB5.
 CC OS RATTUS NORVEGICUS (RAT).
 CC OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
 CC [1]
 CC RP SEQUENCE FROM N.A.
 CC RC STRAIN-SPRAGUE-DAWLEY;
 CC RA KELLNER G.S., MACIEJEWSKI-LENOIR D., LEE E.D., MAKI R.A.;
 CC RL SUBMITTED (FEB-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 CC CC -1- FUNCTION: MAY PARTICIPATE IN THE RECRUITMENT OF INFLAMMATORY CELLS
 CC BY INJURED OR INFECTED TISSUE (BY SIMILARITY).
 CC -1- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).
 CC -----
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 CC -----
 CC EMBL: U90448; GI899248; .
 CC PROSITE: PS00471; SMALL_CYTOKINES_CXC; 1.
 CC PFAM: PF00048; i18; 1.
 CC HSSP: P10889; IMI2.
 CC KW CYTOKINE; SIGNAL.
 CC FT SIGNAL 1 37 POTENTIAL.
 CC FT CHAIN 38 130 CYTOKINE LIX.
 CC FT DISULFID 50 76 BY SIMILARITY.
 CC FT DISULFID 52 93 BY SIMILARITY.
 SQ SEQUENCE 130 AA; 14263 MW; 5F6C874C CRC32;
 CC
 CC Query Match 68.3%; Score 56; DB 1; Length 130;
 CC Best Local Similarity 41.7%; Pred. No. 7.39e-02;
 CC Matches 5; Conservative 5; Mismatches 2; Indels 0; Gaps 0;
 CC
 CC Db 91 NVCLDQAPLIK 102
 CC | : : : : :
 CC QY 1' KACLNPASPIVK 12
 CC
 CC RESULT 15
 CC ID CPLB_RAT STANDARD; PRT; 543 AA.
 CC AC Q64678;
 CC DT 15-DEC-1998 (REL. 37, CREATED)
 CC DT 15-DEC-1998 (REL. 37, LAST SEQUENCE UPDATE)
 CC DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
 CC DE CYTOCHROME P450 1B1 (EC 1.14.14.1) (CYP1B1) (P450RAP).
 CC GN CYP1B1.
 CC OS RATTUS NORVEGICUS (RAT).

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OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
RN [1]
RP SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
RC STRAIN-SPRAGUE-DAWLEY;
RX MEDLINE; 95263485.
RA BHATTACHARYA K.K., BRAKE P.B., ELTOM S.E., OTTO S.A., JEFFCOATE C.R.;
RT "Identification of a rat adrenal cytochrome P450 active in polycyclic
RT hydrocarbon metabolism as rat CYP1B1. Demonstration of a unique
RT tissue-specific pattern of hormonal and aryl hydrocarbon
RT receptor-linked regulation.";
RL J. BIOL. CHEM. 270:11595-11602(1995).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN-SPRAGUE-DAWLEY; TISSUE=LIVER;
RX MEDLINE; 95308679.
RA WALKER N.J., GASTEL J.A., COSTA L.T., CLARK G.C., LUCIER G.W.,
RA SUTTER T.R.;
RT "Rat CYP1B1: an adrenal cytochrome P450 that exhibits sex-dependent
RT expression in livers and kidneys of TCDD-treated animals.";
RL CARCINOGENESIS 16:1319-1327(1995).
CC -!- FUNCTION: CYTOCHROMES P450 ARE A GROUP OF HEME-THIOLATE
CC MONOOXYGENASES. IN LIVER MICROSOMES, THIS ENZYME IS INVOLVED IN AN
CC NADPH-DEPENDENT ELECTRON TRANSPORT PATHWAY. IT OXIDIZES A VARIETY
CC OF STRUCTURALLY UNRELATED COMPOUNDS, INCLUDING STEROIDS, FATTY
CC ACIDS, AND XENOBIOTICS.
CC -!- CATALYTIC ACTIVITY: RH + REDUCED FLAVOPROTEIN + O(2) = ROH +
CC OXIDIZED FLAVOPROTEIN + H(2)O.
CC -!- SUBCELLULAR LOCATION: MEMBRANE-BOUND. ENDOPLASMIC RETICULUM.
CC -!- INDUCTION: BY POLYCYCLIC AROMATIC HYDROCARBONS (PAH) AND BY
CC 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (TCDD).
CC -!- SIMILARITY: BELONGS TO THE CYTOCHROME P450 FAMILY.
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DR EMBL; X83867; G853814; -.
DR EMBL; U09540; G1039377; -.
DR PROSITE; PS00086; CYTOCHROME_P450; 1.
DR PFAM; PF00067; P450; 1.
KW OXIDOREDUCTASE; MONOOXYGENASE; ELECTRON TRANSPORT; MEMBRANE; HEME;
KW MICROSOME; ENDOPLASMIC RETICULUM.
FT BINDING 470 470 HEME (BY SIMILARITY).
SQ SEQUENCE 543 AA; 60556 MW; DC0591ED CRC32;

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Query Match      58.3%; Score 56; DB 1; Length 543;
Best Local Similarity 60.0%; Pred. No. 7.39e-02;
Matches 6; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

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Db 189 ACLDPT011 198
Qy 2 ACLNPASPIV 11

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Search completed: Fri Feb 4 18:03:16 2000
Job time : 8 secs.

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W P S R E H

(TM)

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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 18:02:23 2000; MasPar time 3.57 Seconds
Tabular output not generated.
134.678 Million cell updates/sec

Title: >US-09-150-813-72
Description: (1-12) from US09150813.pep
Perfect Score: 82
Sequence: 1 KACLNPAPIVK 12

Scoring table: PAM 150
Gap 15

Searched: 122810 seqs, 40068593 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: pir60
1:pir1 2:pir2 3:pir3 4:pir4

Statistics: Mean 23.040; Variance 28.486; scale 0.809

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description	Pred. No.
1	82	100.0	107	2	A28414 melanoma growth-stimu	1.57e-07
2	77	93.9	107	2	JH0281 macrophage inflammat	3.03e-06
3	70	85.4	107	2	B38290 GRO-gamma precursor	1.68e-04
4	59	72.0	132	2	A57325 C-X-C chemokine LIX	6.55e-02
5	58	70.7	100	2	JH0200 macrophage inflammat	1.10e-01
6	57	69.5	101	2	B28414 growth-regulated prot	1.83e-01
7	57	69.5	119	2	S42881 platelet basic protei	1.83e-01
8	57	69.5	128	1	TGHU beta-thromboglobulin	1.83e-01
9	56	68.3	75	2	B54188 granulocyte chemotact	3.04e-01
10	56	68.3	543	2	I48130 cytochrome P450 1B1	3.04e-01
11	56	68.3	614	2	S58444 SUP35 protein - Afric	3.04e-01
12	55	67.1	53	2	I64831 gene KC protein - rat	5.02e-01
13	55	67.1	96	2	A32954 gro-alpha precursor	5.02e-01
14	55	67.1	96	2	JN0572 neutrophil chemo-atr	1.35e+00
15	53	64.6	53	2	I51886 macrophage inflammat	1.35e+00
16	53	64.6	100	2	S21467 macrophage inflammat	1.35e+00
17	53	64.6	100	2	I55614 macrophage inflammat	1.35e+00
18	53	64.6	115	2	E71362 hypothetical protein	1.35e+00
19	53	64.6	117	2	B42553 alveolar macrophage c	1.35e+00
20	51	62.2	75	2	A54188 granulocyte chemotact	3.53e+00
21	51	62.2	98	2	I59277 Mob-1 - rat	3.53e+00
22	51	62.2	114	2	A55010 neutrophil-activating	3.53e+00
23	51	62.2	125	2	JN0470 interferon gamma-indu	3.53e+00

DNA-binding protein - 3.53e+00
DNA-binding protein p 3.53e+00
interferon gamma-indu 3.56e+00
platelet factor 4, in 5.66e+00
hypothetical protein 5.66e+00
1.4-alpha-glucan bran 5.66e+00
hydroxymethylglutaryl 5.66e+00
bime protein - Emeric 5.66e+00
tubulin alpha chain - 9.03e+00
tubulin alpha chain 1 9.03e+00
tubulin alpha chain (9.03e+00
tubulin alpha chain - 9.03e+00
tubulin alpha chain - 9.03e+00
tubulin alpha chain - 9.03e+00
tubulin alpha chain - 9.03e+00
tubulin alpha chain - 9.03e+00
tubulin alpha chain - 9.03e+00
tubulin alpha chain - 9.03e+00
tubulin alpha chain - 9.03e+00
gag polyprotein - mou 9.03e+00

ALIGNMENTS

RESULT 1
ENTRY #type complete
TITLE melanoma growth-stimulatory activity precursor - human
ALTERNATE_NAMES fibroblast-derived neutrophil-activating protein gamma;
GRO-alpha; growth regulated protein; MGSA; NAP-3 melanoma
mitogenic protein
ORGANISM #formal_name Homo sapiens #common_name man
DATE 30-Jun-1989 #sequence_revision 30-Jun-1989 #text_change
08-Sep-1997
ACCESSIONS SI3669; A28414; S00983; B60401; S03976; A47626; B46519
REFERENCE SI3669
#authors Baker, N.E.; Kucera, G.; Richmond, A.
#journal Nucleic Acids Res. (1990) 18:6453
#title Nucleotide sequence of the human melanoma growth stimulatory
activity (MGSA) gene.
#cross-references MUID:91057157
#accession SI3669
#status preliminary
#molecule_type DNA
#residues 1-107 #label BAK
#cross-references EMBL:X54489; NID:g34625; PID:g34626
REFERENCE A34184
#authors Anisowicz, A.; Bardwell, L.; Sager, R.
#journal Proc. Natl. Acad. Sci. U.S.A. (1987) 84:7188-7192
#title Constitutive overexpression of a growth-regulated gene in
transformed Chinese hamster and human cells.
#cross-references MUID:88041072
#accession A28414
#molecule_type mRNA
#residues 1-107 #label ANI
#cross-references GB:J03561; NID:g183622; PID:g306806
REFERENCE S00983
#authors Richmond, A.; Balentien, E.; Thomas, H.G.; Flaggs, G.;
Barton, D.E.; Spiess, J.; Bordon, R.; Francke, U.;
Derynck, R.
#journal EMBO J. (1988) 7:2025-2033
#title Molecular characterization and chromosomal mapping of
melanoma growth stimulatory activity, a growth factor
structurally related to beta-thromboglobulin.
#cross-references MUID:88328991
#accession S00983
#molecule_type mRNA
#residues 1-107 #label RIC
#cross-references EMBL:X12510; NID:g34621; PID:g34622
REFERENCE A60401
#authors Schroeder, J.M.; Sticherling, M.; Henneicke, H.H.; Preissner,
W.C.; Christophers, E.

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#journal J. Immunol. (1990) 144:2223-2232
#title IL-1alpha or tumor necrosis factor-alpha stimulate release of
three NAP-1/IL-8-related neutrophil chemotactic proteins in
human dermal fibroblasts.
#cross-references MUID:90187866
#accession B60401
#molecule_type protein
#residues 35-42,'X',44,'X',46-48 #label SCH
#experimental_source dermal fibroblasts
REFERENCE S03975
#authors Golds, E.E.; Mason, P.; Nyirkos, P.
#journal Biochem. J. (1989) 259:585-588
#title Inflammatory cytokines induce synthesis and secretion of gro
protein and a neutrophil chemotactic factor but not
beta-2-microglobulin in human synovial cells and
fibroblasts.
#cross-references MUID:89246368
#accession S03976
#molecule_type protein
#residues 35-41,'X',43-49,'X',51-52,'XX',55-57 #label GOL
REFERENCE A47626
#authors Schroeder, J.M.; Persoon, N.L.M.; Christophers, E.
#journal J. Exp. Med. (1990) 171:1091-1100
#title Lipopolysaccharide-stimulated human monocytes secrete, apart
from neutrophil-activating peptide 1/interleukin 8, a
second neutrophil-activating protein. NH-2-terminal amino
acid sequence identity with melanoma growth stimulatory
activity.
#accession A47626
#molecule_type protein
#residues 35-63,'X',65 #label SC2
#experimental_source LPS-stimulated monocytes
REFERENCE A46519
#authors Proost, P.; De Wolf-Peeters, C.; Conings, R.; Opdenakker, G.;
Billiau, A.; Van Damme, J.
#journal J. Immunol. (1993) 150:1000-1010
#title Identification of a novel granulocyte chemotactic protein
(GCP-2) from human tumor cells. In vitro and in vivo
comparison with natural forms of GRO, IP-10, and IL-8.
#cross-references MUID:93139489
#accession B46519
#molecule_type protein
#residues 35-62 #label PRO
#experimental_source MG-63 osteosarcoma cells
GENETICS
#gene GDB:GRO1
#map_position 4q21-4q21
#cross-references GDB:120181; OMIM:155730
CLASSIFICATION #superfamily beta-thromboglobulin
FEATURE
1-34 #domain signal sequence #status predicted #label SIG\
35-107 #product melanoma growth-stimulatory activity #status
experimental #label MAT
SUMMARY #length 107 #molecular-weight 11301 #checksum 1301
Query Match 100.0%; Score 82; DB 2; Length 107;
Best Local Similarity 100.0%; Pred. No. 1.57e-07;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Db 83 KACLNPASPIVK 94
QY 1 KACLNPASPIVK 12
|||||
RESULT 2
ENTRY #type complete
TITLE macrophage inflammatory protein 2 alpha precursor - human
ALTERNATE_NAMES gro-beta; growth regulated protein beta; melanoma
growth-stimulatory activity; monocyte adherence-induced
protein 2
ORGANISM #formal_name Homo sapiens #common_name man
DATE 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change
31-Oct-1997

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ACCESSIONS JH0281; A35931; A38290; A60407
REFERENCE JH0200
#authors Tekamp-Olson, P.; Gallegos, C.; Bauer, D.; McClain, J.;
Sherry, B.; Fabre, M.; van Deventer, S.; Cerami, A.
#journal J. Exp. Med. (1990) 172:911-919
#title Cloning and characterization of cDNAs for murine macrophage
inflammatory protein 2 and its human homologues.
#cross-references MUID:90354792
#accession JH0281
#molecule_type mRNA
#residues 1-107 #label TEK
#cross-references GB:X53799; NID:g34658; PID:g34659
REFERENCE A35931
#authors Iida, N.; Grotendorst, G.R.
#journal Mol. Cell. Biol. (1990) 10:5596-5599
#title Cloning and sequencing of a new gro transcript from activated
human monocytes: expression in leukocytes and wound tissue.
#cross-references MUID:90377259
#accession A35931
#molecule_type mRNA
#residues 1-107 #label IID
#cross-references GB:M57731; GB:M36964; NID:g183626; PID:g183627
REFERENCE A38290
#authors Haskill, S.; Peace, A.; Morris, J.; Sporn, S.A.; Anisowicz,
A.; Lee, S.W.; Smith, T.; Martin, G.; Ralph, P.; Sager, R.
#journal Proc. Natl. Acad. Sci. U.S.A. (1990) 87:7732-7736
#title Identification of three related human GRO genes encoding
cytokine functions.
#cross-references MUID:91017578
#accession A38290
#molecule_type mRNA
#residues 1-107 #label HAS
#cross-references GB:M36820; NID:g183628; PID:g183629
REFERENCE A60407
#authors Sporn, S.A.; Eierman, D.F.; Johnson, C.E.; Morris, J.;
Martin, G.; Ladner, M.; Haskill, S.
#journal J. Immunol. (1990) 144:4434-4441
#title Monocyte adherence results in selective induction of novel
genes sharing homology with mediators of inflammation and
tissue repair.
#cross-references MUID:90257367
#accession A60407
#status not compared with conceptual translation
#molecule_type mRNA
#residues 56-107 #label SPO
CLASSIFICATION #superfamily beta-thromboglobulin
KEYWORDS inflammation
FEATURE
1-34 #domain signal sequence #status predicted #label SIG\
35-107 #product macrophage inflammatory protein 2 alpha #status
predicted #label MAT
SUMMARY #length 107 #molecular-weight 11389 #checksum 929
Query Match 93.9%; Score 77; DB 2; Length 107;
Best Local Similarity 91.7%; Pred. No. 3.03e-06;
Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 83 KACLNPASPMVK 94
QY 1 KACLNPASPIVK 12
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RESULT 3
ENTRY #type complete
TITLE GRO-gamma precursor - human
ALTERNATE_NAMES growth-regulated protein gamma; macrophage inflammatory
protein 2 beta
ORGANISM #formal_name Homo sapiens #common_name man
DATE 31-May-1991 #sequence_revision 27-Oct-1995 #text_change
08-Sep-1997
ACCESSIONS JH0282; B38290; C46519
REFERENCE JH0200
#authors Tekamp-Olson, P.; Gallegos, C.; Bauer, D.; McClain, J.;

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#journal      Sherry, B.; Fabre, M.; van Deventer, S.; Cerami, A.
#title        J. Exp. Med. (1990) 172:911-919
#cross-references GB:90354792
#accession    JH0282
#molecule_type mRNA
#residues     1-107 ##label TEK
##cross-references GB:X53800; NID:g34662; PID:g34663
REFERENCE     A38290
#authors      Haskill, S.; Peace, A.; Morris, J.; Sporn, S.A.; Anisowicz,
A.; Lee, S.W.; Smith, T.; Martin, G.; Ralph, P.; Sager, R.
#journal      Proc. Natl. Acad. Sci. U.S.A. (1990) 87:7732-7736
#title        Identification of three related human GRO genes encoding
cytokine functions.
#cross-references MUID:91017578
#accession    B38290
#molecule_type mRNA
#residues     1-26, 'G', 29-107 ##label HAS
##cross-references GB:M36821; NID:g183632; PID:g183633
REFERENCE     A46519
#authors      Proost, P.; De Wolf-Peeters, C.; Conings, R.; Opdenakker, G.;
Billiau, A.; Van Damme, J.
#journal      J. Immunol. (1993) 150:1000-1010
#title        Identification of a novel granulocyte chemotactic protein
(GCP-2) from human tumor cells. In vitro and in vivo
comparison with natural forms of GRO, IP-10, and IL-8.
#cross-references MUID:9339489
#accession    C46519
#molecule_type protein
#residues     35-52 ##label PRO
#experimental_source MG-63 osteosarcoma cells
GENETICS
#map_position 4q21
CLASSIFICATION #superfamily beta-thromboglobulin
FEATURE
1-34
35-107
#length 107 #molecular-weight 11342 #checksum 2559
SUMMARY
Query Match      85.4%; Score 70; DB 2; Length 107;
Best Local Similarity 90.9%; Pred. No. 1.68e-04;
Matches 10; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db      83 KACLNPASPMV 93
QY      1 KACLNPASPIV 11

RESULT      4
ENTRY       A57325 #type complete
TITLE       C-X-C chemokine LIX - mouse
ALTERNATE_NAMES GARG-8/LIX; glucocorticoid-attenuated response gene 8
ORGANISM     #formal_name Mus musculus #common_name house mouse
DATE         08-Dec-1995 #sequence_revision 08-Dec-1995 #text_change
08-Sep-1997
ACCESSIONS   A57325
REFERENCE     Smith, J.B.; Herschman, H.R.
#journal      J. Biol. Chem. (1995) 270:16756-16765
#title        Glucocorticoid-attenuated response genes encode intercellular
mediators, including a new C-X-C chemokine.
#cross-references MUID:95348101
#accession    A57325
#status       preliminary; not compared with conceptual translation
#molecule_type mRNA
#residues     1-132 ##label SMI
##cross-references GB:U27267; NID:g950158; PID:g950159
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY      #length 132 #molecular-weight 14190 #checksum 2181

Query Match      72.0%; Score 59; DB 2; Length 132;
Best Local Similarity 50.0%; Pred. No. 6.55e-02;

Matches 5; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db      95 CLDPEAPVIV 104
QY      3 CLNPASPIV 12

RESULT      5
ENTRY       JH0200 #type complete
TITLE       macrophage inflammatory protein 2 precursor - mouse
ORGANISM     #formal_name Mus musculus #common_name house mouse
DATE         30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change
08-Sep-1997
ACCESSIONS   JH0200; A32190
REFERENCE     Tekamp-Olson, P.; Gallegos, C.; Bauer, D.; McClain, J.;
Sherry, B.; Fabre, M.; van Deventer, S.; Cerami, A.
#journal      J. Exp. Med. (1990) 172:911-919
#title        Cloning and characterization of cDNAs for murine macrophage
inflammatory protein 2 and its human homologues.
#cross-references MUID:90354792
#accession    JH0200
#molecule_type mRNA
#residues     1-100 ##label TEK
##cross-references GB:X53798; NID:g53128; PID:g53129
REFERENCE     A32190
#authors      Wolpe, S.D.; Sherry, B.; Juers, D.; Davatelis, G.; Yurt,
R.W.; Cerami, A.
#journal      Proc. Natl. Acad. Sci. U.S.A. (1989) 86:612-616
#title        Identification and characterization of macrophage
inflammatory protein 2.
#cross-references MUID:89098980
#accession    A32190
#molecule_type protein
#residues     28-59 ##label WOL
CLASSIFICATION #superfamily beta-thromboglobulin
KEYWORDS      heparin binding
FEATURE
1-27
28-100
#domain signal sequence #status predicted #label SIG\
#product macrophage inflammatory protein 2 #status
experimental #label MAT
#length 100 #molecular-weight 10621 #checksum 8720
SUMMARY
Query Match      70.7%; Score 58; DB 2; Length 100;
Best Local Similarity 54.5%; Pred. No. 1.10e-01;
Matches 6; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db      76 KVCLEAPVIV 86
QY      1 KACLNPASPIV 11

RESULT      6
ENTRY       B28414 #type complete
TITLE       growth-regulated protein precursor - Chinese hamster
ORGANISM     #formal_name Cricetulus griseus #common_name Chinese hamster
DATE         30-Jun-1989 #sequence_revision 30-Jun-1989 #text_change
20-Mar-1998
ACCESSIONS   B28414
REFERENCE     Anisowicz, A.; Bardwell, L.; Sager, R.
#journal      Proc. Natl. Acad. Sci. U.S.A. (1987) 84:7188-7192
#title        Constitutive overexpression of a growth-regulated gene in
transformed Chinese hamster and human cells.
#cross-references MUID:88041072
#accession    B28414
#molecule_type mRNA
#residues     1-101 ##label ANI
##cross-references GB:J03560; NID:gi91088; PID:g304509
#note         the authors translated the codon CAG for residue 52 as
Glu
CLASSIFICATION #superfamily beta-thromboglobulin
FEATURE

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1-23      #domain signal sequence #status predicted #label SIG\
24-101    #product growth-regulated protein #status predicted
          #label MAT
SUMMARY   #length 101 #molecular-weight 10893 #checksum 3057
          #length 101 #molecular-weight 10893 #checksum 3057
Query Match      69.5%; Score 57; DB 2; Length 101;
Best Local Similarity 70.0%; Pred. No. 1.83e-01;
Matches          2; Mismatches 1; Indels 0; Gaps 0;
78 ACLNPEAPMV 87
|||||:|:|
Qy 2 ACLNPASPIV 11

RESULT 7
ENTRY   S42881      #type complete
TITLE   platelet basic protein - pig
ORGANISM formal_name Sus scrofa domestica #common_name domestic pig
DATE    06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change
        17-Mar-1999
ACCESSIONS S43460; S42881
REFERENCE  S43460;
#authors  Power, C.A.; Proudfoot, A.E.I.; Magnenat, E.; Bacon, K.B.;
          Wells, T.N.C.
#journal  Eur. J. Biochem. (1994) 221:713-719
#title    Molecular cloning and characterisation of a neutrophil
          chemotactic protein from porcine platelets.
#cross-references MUID:94229068
#accession S43460
#status   preliminary
#molecule_type mRNA
#residues 1-119 #label POW
#cross-references EMBL:X77935; NID:g457753; PID:g457754
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY   #length 119 #molecular-weight 12615 #checksum 9198

Query Match      69.5%; Score 57; DB 2; Length 119;
Best Local Similarity 50.0%; Pred. No. 1.83e-01;
Matches          3; Mismatches 3; Indels 0; Gaps 0;
94 KICLDPEAPRIK 105
|||||:|:|
Qy 1 KACLNPAPIVK 12

RESULT 8
ENTRY   TGHU      #type complete
TITLE   beta-thromboglobulin precursor - human
CONTAINS histamine-releasing factor; neutrophil-activating peptide
          histamine-releasing factor; platelet basic protein
ORGANISM #formal_name Homo sapiens #common_name man
DATE      30-Apr-1979 #sequence_revision 31-Dec-1992 #text_change
          26-Feb-1999
ACCESSIONS A39546; A37382; A24448; PL0222; A93982; A90411; A60709;
          A61240; B61240; A03240; A30159; A33516; S46247
          A39546
REFERENCE  Majumdar, S.; Gonder, D.; Koutsis, B.; Poncz, M.
          J. Biol. Chem. (1991) 266:5785-5789
          Characterization of the human beta-thromboglobulin gene.
          Comparison with the gene for platelet factor 4.
#cross-references MUID:91170256
#accession A39546
#molecule_type DNA
#residues 1-128 #label MAJ
#cross-references GB:M54995; NID:g181175; PID:g181176
#note     the authors translated the codon GAT for residue 109 as
          Pro
          A37382
REFERENCE  Wenger, R.H.; Wicki, A.N.; Walz, A.; Kieffer, N.; Clemetson,
          K.J.
          Blood (1989) 73:1498-1503
          Cloning of cDNA coding for connective tissue activating
          peptide III from a human platelet-derived lambdagtII
          expression library.
#cross-references MUID:89229374
#accession A37382
#molecule_type mRNA
#residues 1-128 #label WEN
#cross-references GB:M54995; NID:g181175; PID:g181176; GB:M38441
REFERENCE  A24448
#authors  Holt, J.C.; Harris, M.E.; Holt, A.M.; Lange, E.; Henschen,
          A.; Niewiarowski, S.
#journal  Biochemistry (1986) 25:1988-1996
#title    Characterization of human platelet basic protein, a precursor
          form of low-affinity platelet factor 4 and
          beta-thromboglobulin.
#cross-references MUID:86216117
#accession A24448
#molecule_type protein
#residues 35-53 #label HOL
REFERENCE  PL0222
#authors  Walz, A.; Baggiolini, M.
#journal  J. Exp. Med. (1990) 171:449-454
#title    Generation of the neutrophil-activating peptide NAP-2 from
          platelet basic protein or connective tissue-activating
          peptide III through monocyte proteases.
#cross-references MUID:90155110
#accession PL0222
#molecule_type protein
#residues 54-67 #label WAL
REFERENCE  A93982
#authors  Castor, C.W.; Miller, J.W.; Walz, D.A.
#journal  Proc. Natl. Acad. Sci. U.S.A. (1983) 80:765-769
#title    Structural and biological characteristics of connective
          tissue activating peptide (CTAP-III), a major human
          platelet-derived growth factor.
#cross-references MUID:83144010
#accession A93982
#molecule_type protein
#residues 44-66;125-128 #label CAS
REFERENCE  A90411
#authors  Begg, G.S.; Pepper, D.S.; Chesterman, C.N.; Morgan, F.J.
#journal  Biochemistry (1978) 17:1739-1744
#title    Complete covalent structure of human beta-thromboglobulin.
#cross-references MUID:78187279
#accession A90411
#molecule_type protein
#residues 48-128 #label BEG
REFERENCE  A60709
#authors  Baeza, M.L.; Reddigari, S.R.; Kornfeld, D.; Ramani, N.;
          Smith, E.M.; Hossler, P.A.; Fischer, T.; Castor, C.W.;
          Gorevic, P.G.; Kaplan, A.P.
          J. Clin. Invest. (1990) 85:1516-1521
          Relationship of one form of human histamine-releasing factor
          to connective tissue activating peptide-III.
#cross-references MUID:90237229
#accession A60709
#molecule_type protein
#residues 44-62, 'X', 64-79 #label BAE
REFERENCE  A61240
#authors  Kaplan, A.P.; Baeza, M.; Reddigari, S.; Kuna, P.
#journal  Int. Arch. Allergy Appl. Immunol. (1991) 94:148-153
#title    Histamine-releasing factors.
#cross-references MUID:92040226
#accession A61240
#molecule_type protein
#residues 44-61, 'XX', 64 #label KAP
#accession B61240
#molecule_type protein
#residues 59-62, 'X', 64-79 #label KA2
REFERENCE  S46247
#authors  Kungl, A.J.; Machius, M.; Huber, R.; Schwer, C.; Lam, C.;
          Aschauer, H.; Ehn, G.; Lindley, I.J.D.; Auer, M.
#journal  FEBS Lett. (1994) 347:300-303
#title    Purification, crystallization and preliminary X-ray
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diffraction analysis of recombinant human
neutrophil-activating peptide 2 (rhNAP-2).
#cross-references MUID:94307404
#contents annotation
COMMENT There appears to be a second beta-thromboglobulin-like human gene.
COMMENT Connective-tissue activating peptides (CTAP) are a group of
proteins capable of activating connective tissue cells. CTAP-I,
-II, -III and -P2, and -PMN are of lymphoid, tumor cell, human
platelet, and polymorphonuclear leukocyte origin, respectively.
CTAP-III, a monomer isolated from platelets, stimulates DNA
synthesis, mitosis, glycolysis, intracellular cAMP accumulation,
prostaglandin E2 secretion, and synthesis of hyaluronic acid and
sulfated glycosaminoglycan. It also stimulates the formation and
secretion of plasminogen activator by human synovial cells.
COMMENT Proteolytic removal of the first four residues of CTAP-III produces
the active peptide beta-thromboglobulin, which is released from
platelets along with platelet factor 4 and platelet-derived
growth factor.
GENETICS
#gene GDB:PPBP; THGB1
#map_position 4p12-4q13
#cross-references GDB:127391; OMIM:121010
#introns 50/1; 95/2
CLASSIFICATION #superfamily beta-thromboglobulin
KEYWORDS growth factor; homotetramer; platelet
FEATURE
1-34
35-43
44-128
48-128
59-128
63-89,65-105
SUMMARY #length 128 #molecular-weight 13894 #checksum 6910
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Best Local Similarity 50.0%; Pred. No. 1.83e-01;
Matches 6; Conservative 3; Mismatches 3; Indels 0; Gaps 0;
Db 103 KICLDPAPRIK 114
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QY 1 KACLNPAPIV 12
RESULT 9
ENTRY B54188 #type complete
TITLE granulocyte chemotactic protein, GCP-2 - bovine
ORGANISM #formal_name Bos primigenius taurus #common_name cattle
DATE 13-Sep-1994 #sequence_revision 18-Nov-1994 #text_change
12-Apr-1995
ACCESSIONS B54188
REFERENCE A54188
#authors Proost, P.; Wuyts, A.; Conings, R.; Lenaerts, J.P.; Billiau,
A.; Opdenakker, G.; Van Damme, J.
#journal Biochemistry (1993) 32:10170-10177
#title Human and bovine granulocyte chemotactic protein-2: complete
amino acid sequence and functional characterization as
chemokines.
#cross-references MUID:94001982
#accession B54188
#status preliminary
#molecule_type protein
#residues 1-75 #label PRO
#experimental_source MDBK cells
#note sequence extracted from NCBI backbone (NCBIP:137967)
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 75 #molecular-weight 7931 #checksum 8842
Query Match 68.3%; Score 56; DB 2; Length 75;
Best Local Similarity 50.0%; Pred. No. 3.04e-01;
Matches 5; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

#cross-references MUID:94307404
#contents annotation
COMMENT There appears to be a second beta-thromboglobulin-like human gene.
COMMENT Connective-tissue activating peptides (CTAP) are a group of
proteins capable of activating connective tissue cells. CTAP-I,
-II, -III and -P2, and -PMN are of lymphoid, tumor cell, human
platelet, and polymorphonuclear leukocyte origin, respectively.
CTAP-III, a monomer isolated from platelets, stimulates DNA
synthesis, mitosis, glycolysis, intracellular cAMP accumulation,
prostaglandin E2 secretion, and synthesis of hyaluronic acid and
sulfated glycosaminoglycan. It also stimulates the formation and
secretion of plasminogen activator by human synovial cells.
COMMENT Proteolytic removal of the first four residues of CTAP-III produces
the active peptide beta-thromboglobulin, which is released from
platelets along with platelet factor 4 and platelet-derived
growth factor.
GENETICS
#gene GDB:PPBP; THGB1
#map_position 4p12-4q13
#cross-references GDB:127391; OMIM:121010
#introns 50/1; 95/2
CLASSIFICATION #superfamily beta-thromboglobulin
KEYWORDS growth factor; homotetramer; platelet
FEATURE
1-34
35-43
44-128
48-128
59-128
63-89,65-105
SUMMARY #length 128 #molecular-weight 13894 #checksum 6910
Query Match 69.5%; Score 57; DB 1; Length 128;
Best Local Similarity 50.0%; Pred. No. 1.83e-01;
Matches 6; Conservative 3; Mismatches 3; Indels 0; Gaps 0;
Db 103 KICLDPAPRIK 114
| | | | | |
QY 1 KACLNPAPIV 12
RESULT 9
ENTRY B54188 #type complete
TITLE granulocyte chemotactic protein, GCP-2 - bovine
ORGANISM #formal_name Bos primigenius taurus #common_name cattle
DATE 13-Sep-1994 #sequence_revision 18-Nov-1994 #text_change
12-Apr-1995
ACCESSIONS B54188
REFERENCE A54188
#authors Proost, P.; Wuyts, A.; Conings, R.; Lenaerts, J.P.; Billiau,
A.; Opdenakker, G.; Van Damme, J.
#journal Biochemistry (1993) 32:10170-10177
#title Human and bovine granulocyte chemotactic protein-2: complete
amino acid sequence and functional characterization as
chemokines.
#cross-references MUID:94001982
#accession B54188
#status preliminary
#molecule_type protein
#residues 1-75 #label PRO
#experimental_source MDBK cells
#note sequence extracted from NCBI backbone (NCBIP:137967)
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 75 #molecular-weight 7931 #checksum 8842
Query Match 68.3%; Score 56; DB 2; Length 75;
Best Local Similarity 50.0%; Pred. No. 3.04e-01;
Matches 5; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

#cross-references MUID:95263485
#accession I48130
#status preliminary
#molecule_type mRNA
#residues 1-543 #label RES
#cross-references EMBL:X83867; NID:G853813; PID:G853814
REFERENCE I52733
#authors Walker, N.J.; Gastel, J.A.; Costa, L.T.; Clark, G.C.; Lucier,
G.W.; Sutter, T.R.
#journal Carcinogenesis (1995) 16:1319-1327
#title Rat CYP1B1: an adrenal cytochrome P450 that exhibits
sex-dependent expression in livers and kidneys of
TCDD-treated animals.
#cross-references MUID:95308679
#accession I52733
#status preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-543 #label RE2
#cross-references EMBL:U09540; NID:G1039376; PID:G1039377
GENETICS
#gene CYP1B1
#classification #superfamily human cytochrome P450 CYP2D6; cytochrome P450
homology
#keywords chromoprotein; heme
FEATURE
470
#binding_site heme iron (Cys) (axial ligand) #status
predicted
SUMMARY #length 543 #molecular-weight 60556 #checksum 2773
Query Match 68.3%; Score 56; DB 2; Length 543;
Best Local Similarity 60.0%; Pred. No. 3.04e-01;
Matches 6; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
Db 189 ACLDPTQPII 198
| | | | | |
QY 2 ACLNPAPIV 11
RESULT 11
ENTRY S58444 #type fragment
TITLE SUP35 protein - African clawed frog (fragment)
ORGANISM #formal_name Xenopus laevis #common_name African clawed frog
DATE 10-Apr-1996 #sequence_revision 19-Apr-1996 #text_change
17-Mar-1999
ACCESSIONS S58444
REFERENCE S58444
#authors Zhouravleva, G.; Frolova, L.; le Goff, X.; le Guellec, R.;
Inge-Vechtomov, S.; Kisselev, L.; Philippe, M.
#journal EMBO J. (1995) 14:4065-4072
#title Termination of translation in eukaryotes is governed by two
interacting polypeptide chain release factors, eRF1 and

```

```

#title      The platelet-derived growth factor-inducible KC gene encodes
            a secretory protein related to platelet alpha-granule
            proteins.
#cross-references MUID:89139485
#accession  A32954
##molecule_type mRNA
##residues  1-96 ##label OOU
##cross-references GB:J04596; NID:g201042; PID:g201043
REFERENCE
#authors    Ryseck, R.P.; MacDonald-Bravo, H.; Mattei, M.G.; Bravo, R.
#journal    Exp. Cell Res. (1989) 180:266-275
#title      Cloning and sequence of a secretory protein induced by growth
            factors in mouse fibroblasts.
#cross-references MUID:89078502
#accession  JH0081
##molecule_type mRNA
##residues  1-96 ##label RYS
COMMENT     This protein is basic and lacks threonine, phenylalanine, and
            tyrosine.
GENETICS
#map_position 5
CLASSIFICATION #superfamily beta-thromboglobulin
KEYWORDS       extracellular protein
FEATURE
1-24
25-96
SUMMARY
Query Match 67.1%; Score 55; DB 2; Length 96;
Best Local Similarity 60.0%; Pred. No. 5.02e-01;
Matches 6; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 74 ACLEDPEARLV 83
    |||:| :|:|
QY 2 ACLNPASPIV 11

RESULT 14
ENTRY   JN0572      #type complete
TITLE   neutrophil chemo-attractant Gro protein precursor - rat
ALTERNATE_NAMES CINC; cytokine-induced neutrophil chemoattractant;
                interleukin-8-like chemokine
ORGANISM #formal_name Rattus norvegicus #common_name Norway rat
DATE      30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change
                08-Sep-1997
ACCESSION JN0572; JQ1519; A34481; A48988; B48988; S51214
REFERENCE JN0572
#authors  Konishi, K.; Takata, Y.; Yamamoto, M.; Yomogida, K.;
            Watanabe, K.; Tsurufuji, S.; Fujioka, M.
#journal  Gene (1993) 126:285-286
#title    Structure of the gene encoding rat neutrophil
            chemo-attractant Gro.
#cross-references MUID:93246259
#accession JN0572
##molecule_type DNA
##residues  1-96 ##label KON
##cross-references DDBJ:D11445; NID:g391854; PID:d1002491; PID:g220755
REFERENCE JQ1519
#authors  Huang, S.; Paulauskis, J.D.; Kobzik, L.
            Biochem. Biophys. Res. Commun. (1992) 184:922-929
#journal  Rat KC cDNA cloning and mRNA expression in lung macrophages
            and fibroblasts.
#title
#cross-references MUID:92246987
#accession JQ1519
##molecule_type mRNA
##residues  1-32, 'S', 34-96 #label HUA
##cross-references GB:M86536
##experimental_source alveolar macrophage
##note         the authors translated the codon AGT for residue 33 as
                Cys, AAC for residue 46 as Gln
REFERENCE A34481
#authors  Watanabe, K.; Konishi, K.; Fujioka, M.; Kinoshita, S.;
            Nakagawa, H.

```

```
#journal J. Biol. Chem. (1989) 264:19559-19563
#title The neutrophil chemoattractant produced by the rat kidney
        epitheloid cell line NRK-52E is a protein related to the
        KC/gro protein.
#cross-references MUID:90062049
#accession A34481
##molecule_type protein
##residues 25-96 ##label WAT

REFERENCE
#authors Nakagawa, H.; Ikesue, A.; Hatakeyama, S.; Kato, H.; Gotoda,
        T.; Komorita, N.; Watanabe, K.; Miyai, H.
#journal Biochem. Pharmacol. (1993) 45:1425-1430
#title Production of an interleukin-8-like chemokine by
        cytokine-stimulated rat NRK-49F fibroblasts and its
        suppression by anti-inflammatory steroids.
#cross-references MUID:93228656
#accession A48988
##status preliminary
##molecule_type protein
##residues 25-57 ##label NAK
##experimental_source kidney, NRK-49F fibroblasts
##note sequence extracted from NCBI backbone (NCBIP:129132)
#accession B48988
##status preliminary
##molecule_type protein
##residues 25-57 ##label NAK
##experimental_source kidney, NRK-49F fibroblasts
##note sequence extracted from NCBI backbone (NCBIP:129131)
REFERENCE
#authors Hanzawa, H.; Haruyama, H.; Watanabe, K.; Tsurufuji, S.
#journal FEBS Lett. (1994) 354:207-212
#title The three dimensional structure of rat cytokine CINC/Gro in
        solution by homonuclear 3D NMR.
#cross-references MUID:95046335
#contents annotation; conformation by (1)H-NMR, residues 25-96
#accession S51214
##molecule_type protein
##residues 25-96 ##label HAN
COMMENT This protein has chemotactic activity for neutrophils and has
        melanoma growth-stimulating activity.
GENETICS
#gene gro; KC
#introns 24/1; 65/2; 92/2
CLASSIFICATION #superfamily beta-thromboglobulin
KEYWORDS cytokine; disulfide bond
FEATURE 1-24
        25-96
SUMMARY #length 96 #molecular-weight 10249 #checksum 5749

Query Match 67.1%; Score 55; DB 2; Length 96;
Best Local Similarity 60.0%; Pred. No. 5.02e-01;
Matches 6; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 74 ACLDPEAPMV 83
   |||:|:|:|
QY 2 ACLNPASPIV 11

        #domain signal sequence #status predicted #label SIG\
        #product neutrophil chemo-attractant Gro protein #status
        experimental #label Cyt

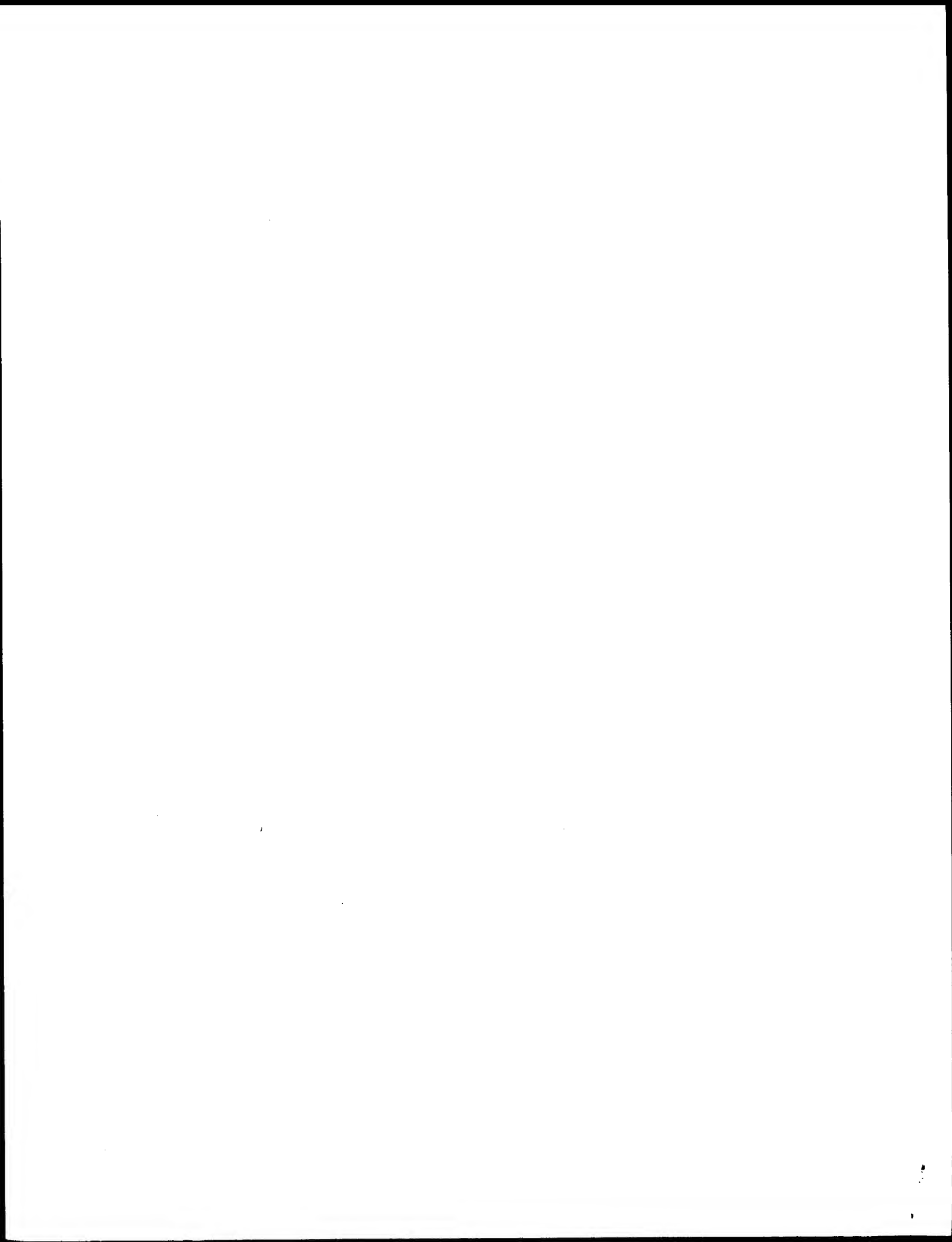
RESULT 15
ENTRY
TITLE macrophage inflammatory protein-2 - rat (fragment)
ORGANISM #Formal_name Rattus sp. #common_name rat
DATE 12-Aug-1996 #sequence_revision 12-Aug-1996 #text_change
        16-Feb-1997
ACCESSIONS I51886
REFERENCE I51886
#authors Huang, S.; Paulauskis, J.D.; Godleski, J.J.; Kobzik, L.
#journal Am. J. Pathol. (1992) 141:981-988
#title Expression of macrophage inflammatory protein-2 and KC mRNA
        in pulmonary inflammation.
#cross-references MUID:93035653
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#accession I51886
##status preliminary; translated from GB/EMBL/DBJ
##molecule_type mRNA
##residues 1-53 ##label RES
##cross-references GB:S45855; NID:g257054
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 53 #checksum 9622

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Best Local Similarity 66.7%; Pred. No. 1.35e+00;
Matches 6; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 40 CLNPEAPLV 48
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QY 3 CLNPASPIV 11

Search completed: Fri Feb 4 18:02:50 2000
Job time : 27 secs.
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(TM)

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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 18:01:46 2000; Maspar time 3.52 Seconds

Tabular output not generated.
72.537 Million cell updates/sec

Title: >US-09-150-813-72

Description: (1-12) from US09150813.pep

Perfect Score: 82

Sequence: 1 KACLNPAPIVK 12

Scoring table: PAM 150

Gap 15

Searched: 170751 seqs, 21266508 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: a-geneseq35

1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
14:part14 15:part15 16:part16 17:part17 18:part18
19:part19 20:part20 21:part21 22:part22 23:part23
24:part24 25:part25 26:part26 27:part27 28:part28
29:part29 30:part30 31:part31 32:part32 33:part33
34:part34 35:part35 36:part36 37:part37 38:part38
39:part39

Statistics: Mean 16.819; Variance 48.942; scale 0.344

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description	Pred. No.
1	82	100.0	70	20	R99809	Chemokine-like protei
2	82	100.0	73	39	W81498	Human mature gro-alm
3	82	100.0	73	24	W17670	Human chemokine gro a
4	82	100.0	73	25	W18024	Human chemokine gro a
5	82	100.0	73	12	R66598	Human gro-alpha chemo
6	82	100.0	101	20	R92318	Chemokine-like protei
7	82	100.0	107	13	R07992	Melanoma growth stimu
8	77	93.9	73	39	W81499	Human gro-beta polype
9	77	93.9	73	25	W18025	Human chemokine gro b
10	77	93.9	73	24	W17671	Human chemokine gro b
11	77	93.9	73	12	R66599	Human gro-beta chemok
12	77	93.9	73	7	R36771	MIP-2alpha.
13	77	93.9	102	13	R07993	Gro-beta/MIP-2-alpha.
14	77	93.9	107	4	R23034	Human Gro beta cytol
15	77	93.9	107	4	R20529	Human macrophage infl
16	77	93.9	107	4	R20589	Human macrophage infl

Active domain from me
putative glycan bindi
Gro alpha.
Human mature gro-gamm
Human chemokine gro g
Protein used to gener
Human chemokine gro g
Human gro-gamma chemo
MIP-2beta.
Chimeric interleukin-
Human gro gamma cytot
Human macrophage infl
Human macrophage infl
Gro-gamma/MIP-2-beta.
Amino acid sequence o
Murine macrophage inf
Murine macrophage inf
Macrophage derived in
Heparanase C-terminal
NAP-2.
Neutrophil-activating
Synthetic NAP-2V.
Connective tissue act
Sequence encoded by s
CTAP-III heparanase.
Platelet basic protei
Leukocyte derived gro
Precursor of platelet
Leukocyte derived gro

ALIGNMENTS

RESULT 1

ID R99809 standard; peptide; 70 AA.
AC R99809;
DT 22-MAR-1997 (first entry)
DE Chemokine-like protein PF4-414.
KW Human; chemokine; PF4-414; platelet factor-4; mutant; Gro-alpha;
KW active domain; melanoma growth stimulating factor-alpha;
KW myelosuppressive; cytostatic; antitumour; leukaemia;
KW polycythaemia vera; hypermakaryocytopenia; therapy; diagnostic;
KW myeloid progenitor cell; expansion; bone marrow transplantation.
OS Homo sapiens.
FH Key
FT active_site 7..9 Location/Qualifiers
FT /note= "Platelet factor-4 active domain (R99809, claim 13)"
FT misc_difference 10
FT /note= "Conserved Cys residue"
FT misc_difference 12
FT /note= "Conserved Cys residue"
FT misc_difference 36
FT /note= "Conserved Cys residue"
FT active_site 49..59
FT /note= "Gro-alpha active domain (R99809, claim 13)"
FT misc_difference 52
FT /note= "Conserved Cys residue"
FT WO9613587-A1.
FT 09-MAY-1996.
FT 26-OCT-1995; U13897.
FT 26-OCT-1994; US-330163.
FT 07-JUN-1995; US-482111.
FT (REPK) REPLIGEN CORP.
FT Daly TJ, Larosa GJ;
FT WPI; 96-239500/24.
FT N-PSDB; T30206.
FT Chemokine-like proteins with active domains from different
PT chemokine(s) - provide modified activities, which exhibit high
PT myelo-suppressive activity
PS Claim 14; Page 80; 115pp; English.
CC This is a novel chemokine-like protein (PF4-414), based on platelet
factor-4 (PF-4), with 4 conserved cysteine residues. The protein

CC has been modified by replacing the 2nd active domain (DLQ, R92319)
 CC with an active domain from melanoma growth stimulating factor-alpha
 CC (gro-alpha, R9808). The resulting protein has the PF-4 1st active
 CC domain, DLQ, before the 1st Cys residue, and the gro-alpha domain
 CC replaces a 2nd DLQ sequence present in wild-type PF-4 after the 4th
 CC Cys residue. A version with a signal peptide is given in R92318.
 CC The sequence has been derived by mutagenesis of wild-type PF-4
 CC (R9813). The active domains are required for myelosuppressive
 CC activity. The novel chemokine shows higher activity than the wild-
 CC type, and may be used to suppress proliferation of actively dividing
 CC myeloid cells, as an adjunctive agent in chemotherapy or radiation
 CC therapy, in therapy of myelogenous leukaemia, polycythaemia vera or
 CC hypermegakaryocytopenic disorders, or to detect, isolate and expand
 CC progenitor cells ex vivo for transplantation. The protein does not
 CC show adverse neutrophil activation or inflammatory side-effects.
 CC Sequence 70 AA;

Query Match 100.0%; Score 82; DB 20; Length 70;
 Best Local Similarity 100.0%; Pred. No. 1.21e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 50 kaclnpaspivk 61
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 QY 1 KACLNPAPIVK 12

RESULT 2

ID W81498 standard; Protein; 73 AA.

AC W81498; 1999 (first entry)

DT Human mature gro-alpha polypeptide used to treat sepsis.

DE Gro-alpha; chemokine; human; sepsis; septic shock; therapy.

KW Homo sapiens.

OS W09848828-A1.

PN 05-NOV-1998.

PD 29-APR-1998; U08742.

PF 29-APR-1997; US-846966.

PA (SMIK) SMITHKLINE BEECHAM CORP.

PI Demarsh PL, Johanson KO;

DR WPI; 99-024031/02.

PT Treating and preventing sepsis in animals - by using two modified
 gro b chemokines in conjunction with an anti-infective agent

PS Example 1; Page 18; 26pp; English.

CC This is the amino acid sequence of the human gro-alpha chemokine

CC mature polypeptide. The invention relates to a method of preventing

CC and treating sepsis using chemokines selected from mature or

CC modified murine KC (see W81497), or human gro-alpha, gro-beta (see

CC W81499) or gro-gamma (see W81499). A claimed method uses a dimer

CC composed of 2 modified gro-beta chemokines. Further claimed is

CC administering the chemokine in conjunction with an anti-infective

CC agent. The chemokines described in this invention are required to

CC treat and prevent sepsis since antimicrobial agents alone have

CC failed to abrogate septic mortality.

CC Sequence 73 AA;

Query Match 100.0%; Score 82; DB 39; Length 73;
 Best Local Similarity 100.0%; Pred. No. 1.21e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 kaclnpaspivk 60
 |||||
 QY 1 KACLNPAPIVK 12

RESULT 3

ID W17670 standard; Protein; 73 AA.

AC W17670;

DT 25-NOV-1997 (first entry)

DE Human chemokine gro alpha.

KW Gro alpha; chemokine; interleukin; myelosuppression;

KW immunosuppression; haematopoietic cell; infection; cancer;

KW aplastic anaemia; autoimmune disease; stem cell transplant;

KW therapy.

OS Homo sapiens.
 FH Key
 FT protein
 FT 5..73
 FT /note= "preferred polypeptide (Claim 3)"
 PN W09715595-A1.
 PD 01-MAY-1997.
 PD 24-OCT-1996; U17074.
 PR 24-OCT-1995; US-547262.
 PR (SMIK) SMITHKLINE BEECHAM CORP.
 PA King AG, Pelus LM;
 PI WPI; 97-25895/23.
 DR Use of specific chemokine(s) for stem cell mobilisation - useful for
 PT treating myelosuppression or any condition involving
 PT immunosuppression or low levels of haematopoietic cells
 PT Claim 1; Page 20; 31pp; English.
 PS This polypeptide sequence comprises human gro alpha. Use of
 CC mammalian chemokines selected from gro alpha, gro beta (W17671),
 CC gro gamma (W17672) or KC (W17669) for mobilising haematopoietic
 CC cells is claimed. The chemokines, optionally used together with a
 CC growth factor or other haematopoietic regulator, are used to treat
 CC myelosuppression or any condition that involves immunosuppression
 CC or low levels of haematopoietic cells, e.g. infection, cancer,
 CC myelopoietic dysfunction, haematopoietic disorders, aplastic anaemia
 CC or autoimmune disease, or low production/differentiation of
 CC haematopoietic or bone marrow cells. A claimed application is in
 CC peripheral blood stem cell transplants in patients being treated by
 CC chemotherapy. Chemokines having an N-terminal deletion are more
 CC active, e.g. by 2 orders of magnitude, than the full-length protein.
 CC When used with a colony stimulating factor (CSF), a synergistic
 CC effect is achieved and the dose, and side-effects, of CSF can be
 CC reduced. Compared with conventional methods of stem cell transplants,
 CC use of mammalian chemokines provides a more rapid release of
 CC peripheral blood mononuclear cells and/or platelets, reducing risk of
 CC infection and allowing use of higher doses of chemotherapeutic
 CC agents.
 CC Sequence 73 AA;

Query Match 100.0%; Score 82; DB 24; Length 73;
 Best Local Similarity 100.0%; Pred. No. 1.21e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 kaclnpaspivk 60
 |||||
 QY 1 KACLNPAPIVK 12

RESULT 4

ID W18024 standard; protein; 73 AA.

AC W18024; 1998 (first entry)

DT 30-JAN-1998

DE Human chemokine gro alpha.

KW Sepsis; septic shock; therapy; gro alpha; chemokine; human.

OS Homo sapiens.

FH Key

FT protein

FT 5..73
 FT /note= "preferred modified fragment of KC
 (Claim 4)"

PN W09719173-A1.

PD 29-MAY-1997.

PD 20-NOV-1996; U18616.

PR 21-NOV-1995; US-007425.

PA (SMIK) SMITHKLINE BEECHAM CORP.

PI DeMarsh PL, Johanson KO;

DR WPI; 97-29811/27.

PT Use of chemokine(s) such as KC and gro-alpha - to treat or prevent
 sepsis, particularly septic shock

PS Claim 1; Page 18-19; 28pp; English.

CC A claimed method of treating or preventing sepsis comprises

CC administering to an animal an effective amount of a chemokine

CC selected from mature murine KC (see W18023), human gro alpha

CC (W18024), human gro beta (see W18025) and human gro gamma (see

CC W18026), modified fragments of these chemokines and multimeric

CC proteins comprising an association of two chemokine proteins.

CC Sepsis can occur in hospitalised patients, and a consequence of
 CC bacterial sepsis is septic shock. The method of the invention
 CC provides a treatment for sepsis, particularly septic shock, which
 CC is a major cause of death in intensive care units. Septic shock
 CC syndrome apparently has intractable resistance to the effects of
 CC a variety of highly potent antimicrobial agents. Survival is
 CC increased by treatment with the chemokines, both prophylactically
 CC and after infection.
 SQ Sequence 73 AA;

Query Match 100.0%; Score 82; DB 25; Length 73;
 Best Local Similarity 100.0%; Pred. No. 1.21e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 kacInpaspvk 60
 |||||
 QY 1 KACLNPASPIVK 12

RESULT 5

ID R6698 standard; protein; 73 AA.
 AC R6698;
 DE 19-JUL-1995 (first entry)
 DE Human gro-alpha chemokine;
 KW Gro-alpha protein; chemokine; inflammation; antiinflammatory;
 KW hematopoietic synergistic factor; HSF; hematopoietic precursor;
 KW bone marrow; intercrine; desamino gro-alpha; truncation.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT Protein
 FT 5..732
 FT /note= "desamino truncated gro-alpha, claim 7,
 FT page 69"
 FT WO9429341-A.
 PN 22-DEC-1994.
 PD 03-JUN-1994; U06264.
 PF 08-JUN-1993; US-073800.
 PA (SMIK) SMITHKLINE BEECHAM CORP.
 PI Balcarek JM, Bhatnagar P, King AG, Pelus LM;
 DR WPI; 95-036402/05.
 DR New truncated chemokine with increased biological activity - and
 PT related multimers, nucleic acid, antibodies etc., for treating
 PT inflammation, stimulating growth of bone marrow etc., also
 PT peptide(s) for inducing haematopoietic synergistic factor.
 PS Disclosure; Page 51; 89pp; English.
 CC Truncated, desamino chemokine comprising amino acids 5-73 of
 CC human mature gro-alpha (full sequence given in R66698)
 CC shows enhanced biological activity when compared to the mature
 CC protein, and has been used to prepare multimeric, modified
 CC chemokines.
 SQ Sequence 73 AA;

Query Match 100.0%; Score 82; DB 12; Length 73;
 Best Local Similarity 100.0%; Pred. No. 1.21e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 kacInpaspvk 60
 |||||
 QY 1 KACLNPASPIVK 12

RESULT 6

ID R92318 standard; peptide; 101 AA.
 AC R92318;
 DE 28-MAR-1997 (first entry)
 DE Chemokine-like protein PF4-414.
 KW Human; chemokine; PF4-414; platelet factor-4; mutant; Gro-alpha;
 KW active domain; melanoma growth stimulating factor-alpha;
 KW myelosuppressive; cytostatic; antitumour; leukaemia;
 KW polycythaemia vera; hypermakaryocytopoiesis; therapy; diagnostic;
 KW myeloid progenitor cell; expansion; bone marrow transplantation.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT peptide
 FT 1..31

FT peptide /note= "Signal peptide"
 FT 32..101
 FT /note= "Mature PF4-414 (R99809, claim 14)"
 FT active_site 38..40
 FT /note= "Platelet factor-4 active domain (R99823,
 FT claim 1)"
 FT misc_difference 41
 FT /note= "Conserved Cys residue"
 FT misc_difference 43
 FT /note= "Conserved Cys residue"
 FT misc_difference 67
 FT /note= "Conserved Cys residue"
 FT active_site 80..90
 FT /note= "Gro-alpha active domain (R99808, claim 13)"
 FT misc_difference 83
 FT /note= "Conserved Cys residue"
 FT WO9613587-A1.
 PN 09-MAY-1996.
 PD 26-OCT-1995; U13897.
 PR 26-OCT-1994; US-330163.
 PR 07-JUN-1995; US-482111.
 PA (REPK) REPLIGEN CORP.
 PI Daly TJ, Larosa GJ;
 DR WPI; 96-239500/24.
 DR N-PSDB; T30206.
 DR Chemokine(s) - provide modified activities, which exhibit high
 PT myelo-suppressive activity
 PS Disclosure; Fig 3C; 115pp; English.
 CC This is a novel chemokine-like protein (PF4-414), based on platelet
 CC factor-4 (PF-4), with 4 conserved cysteine residues. The protein
 CC has been modified by replacing the 2nd active domain (DLQ, R92319)
 CC with an active domain from melanoma growth stimulating factor-alpha
 CC (Gro-alpha, R99808). The resulting protein has the PF-4 1st active
 CC domain, DLQ, before the 1st Cys residue, and the Gro-alpha domain
 CC replaces a 2nd DLQ sequence present in wild-type PF-4 after the 4th
 CC Cys residue. A version without the signal peptide is given in
 CC R99809 (claim 14). The sequence has been derived by mutagenesis of
 CC wild-type PF-4 (R99813). The active domains are required for
 CC myelosuppressive activity. The novel chemokine shows higher activity
 CC than the wild-type, and may be used to suppress proliferation of
 CC actively dividing myeloid cells, as an adjunctive agent in
 CC leukemia, polycythaemia vera or hypermakaryocytopoietic disorders,
 CC or to detect, isolate and expand progenitor cells ex vivo for
 CC transplantation. The protein does not show adverse neutrophil
 CC activation or inflammatory side-effects.
 SQ Sequence 101 AA;

Query Match 100.0%; Score 82; DB 20; Length 101;
 Best Local Similarity 100.0%; Pred. No. 1.21e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 81 kacInpaspvk 92
 |||||
 QY 1 KACLNPASPIVK 12

RESULT 7

ID R70792 standard; Protein; 107 AA.
 AC R70792;
 DE 29-AUG-1995 (first entry)
 DE Melanoma growth stimulatory activity.
 KW Melanoma growth stimulatory activity; gro/MGSA; heparanase; heparin;
 KW heparan sulfate; arthritis; restenosis; cancer; wound healing.
 OS Homo sapiens.
 PN WO9504158-A.
 PD 09-FEB-1995.
 PF 26-JUL-1994; U08207.
 PR 29-JUL-1993; US-099866.
 PR 13-OCT-1993; US-136117.
 PA (UPJO) UPJOHN CO.
 PI Hoogwerf AJ, Ledbetter SR;

DR WPI; 95-082239/11.
 DR N-PSDB; Q85362.
 PT Screening for cpds. with anti-heparanase activity - by detecting
 PT inhibition of heparin or heparan sulphate degradation,
 PT potentially useful for treating arthritis, restenosis, cancer.
 PS Claim 12; Page 39; 60pp; English.
 CC Purified heparanases, prepared under reducing conditions and
 CC activated with transglutaminase, are given in R70786-804. Most
 CC are prepared by reverse transcription of mRNA from activated human
 CC leukocytes, then cloning of the cDNA into pVL1392 baculovirus
 CC vector, and expression in Sf9 cells in the presence of reduced
 CC glutathione and dithiothreitol.
 SQ Sequence 107 AA;

Query Match 100.0%; Score 82; DB 13; Length 107;
 Best Local Similarity 100.0%; Pred. No. 1.21e-02;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 83 kaclnpaspmvk 94
 QY 1 KACLNPA SPIVK 12
 |||||

RESULT 8

ID W81499 standard; Protein; 73 AA.

AC W81499;
 DT 01-MAR-1999 (first entry)
 DE human gro-beta polypeptide used to treat sepsis.
 KW Gro-beta; chemokine; human; sepsis; septic shock; therapy.
 OS Mus sp.
 FH Key Location/Qualifiers
 FT Protein 5.73
 FT /note= "claimed fragment"
 PN W09848828-AL.
 PD 05-NOV-1998.
 PF 29-APR-1998; U08742.
 PR 29-APR-1997; US-846966.
 PA (SMIK) SMITHKLINE BEECHAM CORP.
 PI Demarsh PL, Johanson KO;
 DR WPI; 99-024031/02.
 PT Treating and preventing sepsis in animals - by using two modified
 PT gro b chemokines in conjunction with an anti-infective agent
 PS Example 1; Page 18; 26pp; English.
 CC This is the amino acid sequence of the human chemokine gro-beta
 CC mature polypeptide. The invention relates to a method of
 CC preventing and treating sepsis using chemokines selected from
 CC mature or modified murine KC (see W81497), or human gro-alpha (see
 CC W81498), gro-beta or gro-gamma (see W81499). A claimed method uses
 CC a dimeric chemokine consisting of 2 covalently linked modified
 CC gro-beta proteins (amino acids 5-73 of the mature polypeptide)
 CC in which the proteins are linked by 2 intermolecular disulphide
 CC bonds between C5-C31 and C7-C47. Further claimed is administering
 CC the chemokine in conjunction with an anti-infective agent. The
 CC chemokines described in this invention are required to treat and
 CC prevent sepsis since antimicrobial agents alone have failed to
 CC abrogate septic mortality.
 SQ Sequence 73 AA;

Query Match 93.9%; Score 77; DB 39; Length 73;
 Best Local Similarity 91.7%; Pred. No. 5.07e-02;
 Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 49 kaclnpaspmvk 60
 QY 1 KACLNPA SPIVK 12
 |||||

RESULT 9

ID W18025 standard; protein; 73 AA.

AC W18025;
 DT 30-JAN-1998 (first entry)
 DE Human chemokine gro beta.
 KW Sepsis; septic shock; therapy; gro beta; chemokine; human.

OS Homo sapiens.
 FH Key Location/Qualifiers
 FT Protein 5.73
 FT /note= "preferred modified fragment of KC
 (Claim 2)"
 PN W09719173-AL.
 PD 29-MAY-1997.
 PF 20-NOV-1996; U18616.
 PR 21-NOV-1995; US-007425.
 PA (SMIK) SMITHKLINE BEECHAM CORP.
 PI Demarsh PL, Johanson KO;
 DR WPI; 97-298111/27.
 PT Use of chemokine(s) such as KC and gro-alpha - to treat or prevent
 PT sepsis, particularly septic shock
 PS Claim 1; Page 19; 28pp; English.
 CC A claimed method of treating or preventing sepsis comprises
 CC administering to an animal an effective amount of a chemokine
 CC selected from mature murine KC (see W18023), human gro alpha (see
 CC W18024), human gro beta (W18025) and human gro gamma (see
 CC W18026), modified fragments of these chemokines and multimeric
 CC proteins comprising an association of two chemokine proteins.
 CC Sepsis can occur in hospitalised patients, and a consequence of
 CC bacterial sepsis is septic shock. The method of the invention
 CC provides a treatment for sepsis, particularly septic shock, which
 CC is a major cause of death in intensive care units. Septic shock
 CC syndrome apparently has intractable resistance to the effects of
 CC a variety of highly potent antimicrobial agents. Survival is
 CC increased by treatment with the chemokines, both prophylactically
 CC and after infection.
 SQ Sequence 73 AA;

Query Match 93.9%; Score 77; DB 25; Length 73;
 Best Local Similarity 91.7%; Pred. No. 5.07e-02;
 Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 49 kaclnpaspmvk 60
 QY 1 KACLNPA SPIVK 12
 |||||

RESULT 10

ID W17671 standard; Protein; 73 AA.

DT 25-NOV-1997 (first entry)
 DE Human chemokine gro beta.
 KW Gro beta; chemokine; interleukin; myelosuppression;
 KW immunosuppression; haematopoietic cell; infection; cancer;
 KW aplastic anaemia; autoimmune disease; stem cell transplant;
 KW therapy.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT Protein 5.73
 FT /note= "preferred polypeptide (Claim 2)"
 PN W09715595-AL.
 PD 01-MAY-1997.
 PF 24-OCT-1996; U17074.
 PR 24-OCT-1995; US-547262.
 PA (SMIK) SMITHKLINE BEECHAM CORP.
 PI King AG, Pelus LM;
 DR WPI; 97-258957/23.
 PT Use of specific chemokine(s) for stem cell mobilisation - useful for
 PT treating myelosuppression or any condition involving
 PT immunosuppression or low levels of haematopoietic cells
 PS Claim 1; Page 21; 31pp; English.
 CC This polypeptide sequence comprises human gro beta. Use of
 CC mammalian chemokines selected from gro alpha (W17670), gro beta,
 CC gro gamma (W17672) or KC (W17669) for mobilising haematopoietic
 CC cells is claimed. The chemokines optionally used together with a
 CC growth factor or other haematopoietic regulator, are used to treat
 CC myelosuppression or any condition that involves immunosuppression
 CC or low levels of haematopoietic cells, e.g. infection, cancer,
 CC myelopoietic dysfunction, haematopoietic disorders, aplastic anaemia
 CC or autoimmune disease, or low production/differentiation of

CC haematopoietic or bone marrow cells. A claimed application is in
 CC peripheral blood stem cell transplants in patients being treated by
 CC chemotherapy. Chemokines having an N-terminal deletion are more
 CC active, e.g. by 2 orders of magnitude, than the full-length protein.
 CC When used with a colony stimulating factor (CSF), a synergistic
 CC effect is achieved and the dose, and side-effects, of CSF can be
 CC reduced. Compared with conventional methods of stem cell transplants,
 CC use of mammalian chemokines provides a more rapid release of
 CC peripheral blood mononuclear cells and/or platelets, reducing risk of
 CC infection and allowing use of higher doses of chemotherapeutic
 CC agents.
 CC Sequence 73 AA;

Query Match 93.9%; Score 77; DB 24; Length 73;
 Best Local Similarity 91.7%; Pred. No. 5.07e-02;
 Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 49 kacInpaspvmvk 60
 |||||:|
 Qy 1 KACLNPASPIVK 12

RESULT 11

ID R66699 standard; protein; 73 AA.
 AC R66699;
 DT 19-JUL-1995 (first entry)
 DE Human gro-beta chemokine.
 KW Gro-alpha protein; chemokine; inflammation; antiinflammatory;
 KW hematopoietic synergistic factor; HSF; hematopoietic precursor;
 KW bone marrow; intercrine; desamino gro-beta; truncation.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT Protein
 FT 5..73
 FT /note= "desamino truncated gro-beta, claim 6,
 FT page 68"
 PN WO9429341-A.
 PD 22-DEC-1994.
 PF 03-JUN-1994; U06264.
 PR 08-JUN-1993; US-073800.
 PA (SMIK) SMITHKLINE BEECHAM CORP.
 PI Balcarek JM, Bhatnagar P, King AG, Pelus LM;
 DR WPI; 95-036402/05.
 PT New truncated chemokine with increased biological activity - and
 PT related multimers, nucleic acid, antibodies etc., for treating
 PT inflammation, stimulating growth of bone marrow etc., also
 PT peptide(s) for inducing haematopoietic synergistic factor.
 PS Disclosure; Page 51-52; 89pp; English.
 CC Truncated, desamino chemokine comprising amino acids 5-73 of
 CC human mature gro-beta (full sequence given in R66699)
 CC shows enhanced biological activity when compared to the mature
 CC protein, and has been used to prepare multimeric, modified
 CC chemokines.
 CC Sequence 73 AA;

Query Match 93.9%; Score 77; DB 12; Length 73;
 Best Local Similarity 91.7%; Pred. No. 5.07e-02;
 Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 49 kacInpaspvmvk 60
 |||||:|
 Qy 1 KACLNPASPIVK 12

RESULT 12

ID R36771 standard; protein; 73 AA.
 AC R36771;
 DT 29-SEP-1993 (first entry)
 DE MIP-2alpha.
 KW Macrophage inflammatory protein; megakaryocytopoiesis; MIP-1; MIP-2;
 KW thrombocythemia; reactive thrombocytosis; stroke; emboli; platelet;
 KW myeloproliferative disorder.
 OS Homo sapiens.
 PN WO9309799-A.

PD 27-MAY-1993.
 PF 13-NOV-1992; U09671.
 PR 15-NOV-1991; US-792988.
 PA (UYPE-) UNIV PENNSYLVANIA.
 PI Gewirtz AM;
 DR WPI; 93-182239/22.
 PT Suppression of megakaryocytopoiesis - by administration of
 PT macrophage inflammatory protein-1 or -2
 PS Disclosure; Page 18; 26pp; English.
 CC A claimed method for reducing the no. of circulating platelets in the
 CC bloodstream of a mammal comprises admin. of MIP-1 and/or MIP-2 or
 CC their analogues to induce such a reduction. The MIP-1, MIP-2 or
 CC analogue may be operatively linked to a carrier. The MIPs can be
 CC used to inhibit megakaryocytopoiesis to effect in vivo reduction of
 CC platelet nos. They can be used to treat disorders with excessively
 CC high platelet counts such as thrombocytosis, stroke, pulmonary emboli
 CC and myeloproliferative disorders.
 CC Sequence 73 AA;

Query Match 93.9%; Score 77; DB 7; Length 73;
 Best Local Similarity 91.7%; Pred. No. 5.07e-02;
 Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 49 kacInpaspvmvk 60
 |||||:|
 Qy 1 KACLNPASPIVK 12

RESULT 13

ID R70793 standard; Protein; 102 AA.
 AC R70793;
 DT 29-AUG-1995 (first entry)
 DE Gro-beta/MIP-2-alpha.
 KW Macrophage inflammatory protein 2-alpha; gro-beta/MIP-2-alpha;
 KW heparanase; heparin; heparan sulfate; arthritis; restenosis;
 KW cancer; wound healing.
 OS Homo sapiens.
 PN WO9504158-A.
 PD 09-FEB-1995.
 PF 26-JUL-1994; U08207.
 PR 29-JUL-1993; US-099866.
 PR 13-OCT-1993; US-136117.
 PA (UPJO) UPJOHN CO.
 PI Hoogwerf AJ, Ledbetter SR;
 DR WPI; 95-082239/11.
 DR N-PSDB; Q85363.
 PT Screening for cpds. with anti-heparanase activity - by detecting
 PT inhibition of heparin or heparan sulphate degradation,
 PT potentially useful for treating arthritis, restenosis, cancer.
 PS Claim 12; Page 40; 60pp; English.
 CC Purified heparanases, prepared under reducing conditions and
 CC activated with transglutaminase, are given in R70786-804. Most
 CC are prepared by reverse transcription of mRNA from activated human
 CC leukocytes, then cloning of the cDNA into pVL1392 baculovirus
 CC vector, and expression in Sf9 cells in the presence of reduced
 CC glutathione and dithiothreitol.
 CC Sequence 102 AA;

Query Match 93.9%; Score 77; DB 13; Length 102;
 Best Local Similarity 91.7%; Pred. No. 5.07e-02;
 Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 83 kacInpaspvmvk 94
 |||||:|
 Qy 1 KACLNPASPIVK 12

RESULT 14

ID R23034 standard; Protein; 107 AA.
 AC R23034;
 DT 26-OCT-1992 (first entry)
 DE Human Gro beta cytokine.
 KW Cytokine; inflammatory response; MAD-2; cancer diagnosis;

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KW colonic epithelial tumour cell.
OS Homo sapiens.
FH Key Location/Qualifiers
FT peptide 1..35 /label= leader
FT /note= "putative"
FT 36..107
FT protein /label= Gro_beta
FT WO9206196-A.
PD 16-APR-1992.
PN 24-SEP-1991; U06936.
PF 28-SEP-1990; US-590223.
PR (CETU ) CETUS CORP.
PA (UYNC-) UNIV OF NORTH CAROLINA.
PI Haskill JS, Nitecki DE, Ralph P;
DR WPI: 92-150882/18.
DR N-PSDB; Q24266.
PT Gro beta and Gro gamma inflammatory cytokine(s) - for use in
PT diagnosing colon cancer
PS Claim 12; Fig 1B; 46pp; English.
CC The cDNA clone coding for inflammatory cytokine Gro-beta was
CC isolated from a mezerin- and calcium ionophore-stimulated leukocyte
CC cDNA library. The amino acid sequence of Gro beta was deduced from
CC the nucleotide sequence. The level of Gro beta in inflammatory
CC response cells can be used as an indication of a test substance's
CC inflammatory activity and to diagnose colon cancer.
CC See also Q24267.
CC Sequence 107 AA;

Query Match 93.9%; Score 77; DB 4; Length 107;
Best Local Similarity 91.7%; Pred. No. 5.07e-02;
Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

DB 83 kacInpaspmyk 94
QY 1 KACLNPASPIVK 12
|||||||:|

RESULT 15
ID R20529 standard; Protein; 107 AA.
AC R20529;
DT 23-APR-1992 (first entry)
DE Human macrophage inflammatory protein (MIP) 2 alpha.
KW Inducible; secretory; inflammatory response; cytokine.
OS Homo sapiens.
FH Key Location/Qualifiers
FT peptide 1..34
FT /label= signal
FT WO9200326-A.
PN WO9200327-A.
PD 09-JAN-1992.
PF 24-JUN-1991; U04482.
PR 22-JUN-1990; US-541897.
PR 19-JUN-1991; US-715194.
PA (CHIR-) CHIRON CORP.
PI Tekamp-Olson P, Gallegos CA;
DR WPI: 92-041519/05.
DR N-PSDB; Q20729
PT Human macrophage inflammatory protein 2-alpha - useful in
PT treating infections, cancer, myelopoietic dysfunction and auto-
PT immune diseases
PT Disclosure; Fig 2; 68pp; English.
CC The sequence was deduced from the DNA sequence obtd. by screening
CC the 937 cDNA library prepd. from poly-A+ RNA from PMA treated and
CC LPS stimulated cells, using as probe a fragment isolated from the
CC mIP-2 cDNA (see Q20728) encoding most of the mature mMIP-2 amino
CC acid sequence. Two classes of human cDNA homologous to mMIP-2 were
CC found designated alpha and beta. The alpha form reproduced here
CC is claimed in WO9200327; the beta form (Q20530) is claimed in
CC WO9200326. The alpha form is the more abundant of the two. The
CC genes can be used to produce recombinant MIP proteins for use in
CC wound healing, to modulate myelopoiesis and to induce adjuvant
CC activity.

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CC See also R20588, R20590 and R20528-30.
SQ Sequence 107 AA;

Query Match 93.9%; Score 77; DB 4; Length 107;
Best Local Similarity 91.7%; Pred. No. 5.07e-02;
Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

DB 83 kacInpaspmyk 94
QY 1 KACLNPASPIVK 12
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Search completed: Fri Feb 4 18:02:06 2000
Job time : 20 secs.

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 W P S R L L (TM)

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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 18:09:28 2000; MasPar time 2.64 Seconds
 128.473 Million cell updates/sec

Tabular output not generated.

Title: >US-09-150-813-73
 Description: (1-12) from US09150813.pep
 Perfect Score: 86
 Sequence: 1 KACLNPA5PMVK 12

Scoring table: PAM 150
 Gap 15

Searched: 77977 seqs, 28268293 residues

Post-processing: Minimum Match 0%
 Listing first 45 summaries

Database: swiss-prot37
 1:swissprot

Statistics: Mean 24.025; Variance 25.608; scale 0.938

pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Result No.	Score	Query Match	Length	DB ID	Description	Pred. No.
1	86	100.0	107	1	M12A_HUMAN MACROPHAGE INFLAMMATOR	4.22e-10
2	79	91.9	107	1	M12B_HUMAN MACROPHAGE INFLAMMATOR	4.97e-08
3	77	89.5	107	1	GRO_HUMAN GROWTH REGULATED PROTE	1.89e-07
4	73	84.9	98	1	GROB_BOVIN GROWTH REGULATED PROTE	2.61e-06
5	71	82.6	104	1	GROB_BOVIN GROWTH REGULATED PROTE	9.48e-06
6	71	82.6	104	1	GROB_BOVIN GROWTH REGULATED PROTE	9.48e-06
7	66	76.7	101	1	GRO_CRIGR GROWTH REGULATED PROTE	2.22e-04
8	64	74.4	71	1	GRO1_RABIT PERMEABILITY FACTOR 2	7.58e-04
9	64	74.4	96	1	GRO_RAT GROWTH REGULATED PROTE	7.58e-04
10	64	74.4	104	1	GRO_CAVPO GROWTH REGULATED PROTE	7.58e-04
11	62	72.1	104	1	GRO2_RABIT GROWTH REGULATED PROTE	7.58e-04
12	60	69.8	100	1	MIP2_MOUSE MACROPHAGE INFLAMMATOR	8.34e-03
13	59	68.6	119	1	PF4L_PIG PLATELET BASIC PROTEIN	1.50e-02
14	59	68.6	128	1	PF4L_HUMAN PLATELET BASIC PROTEIN	1.50e-02
15	58	67.4	75	1	GCP2_BOVIN GRANULOCYTE CHEMOTACTI	2.68e-02
16	58	67.4	130	1	LIX_RAT CYTOKINE LIX PRECURSOR	2.68e-02
17	58	67.4	161	1	TBA1_LYTP1 TUBULIN ALPHA CHAIN (F	2.68e-02
18	58	67.4	412	1	TBA1_CHICK TUBULIN ALPHA-1 CHAIN	2.68e-02
19	58	67.4	444	1	TBA1_ONCKE TUBULIN ALPHA CHAIN.	2.68e-02
20	58	67.4	448	1	TBA1_HUMAN TUBULIN ALPHA-4 CHAIN.	2.68e-02
21	58	67.4	449	1	TBA2_DROME TUBULIN ALPHA-2 CHAIN.	2.68e-02
22	58	67.4	449	1	TBA_XENLA TUBULIN ALPHA CHAIN.	2.68e-02
23	58	67.4	449	1	TBA6_MOUSE TUBULIN ALPHA-6 CHAIN.	2.68e-02

24	58	67.4	450	1	TBA_BOMMO TUBULIN ALPHA CHAIN.	2.68e-02
25	58	67.4	450	1	TBA1_NOTVI TUBULIN ALPHA CHAIN.	2.68e-02
26	58	67.4	450	1	TBA1_DROME TUBULIN ALPHA-1 CHAIN.	2.68e-02
27	58	67.4	450	1	TBA3_DROME TUBULIN ALPHA-3 CHAIN.	2.68e-02
28	58	67.4	450	1	TBA3_MOUSE TUBULIN ALPHA-3 AND AL	2.68e-02
29	58	67.4	450	1	TBA1_ONCMY TUBULIN ALPHA CHAIN, T	2.68e-02
30	58	67.4	451	1	TBA1_HOMAM TUBULIN ALPHA-1 CHAIN	2.68e-02
31	58	67.4	451	1	TBA_TORMA TUBULIN ALPHA CHAIN (A	2.68e-02
32	58	67.4	451	1	TBA_PIG TUBULIN ALPHA CHAIN.	2.68e-02
33	58	67.4	451	1	TBA1_CRIGR TUBULIN ALPHA-1 CHAIN.	2.68e-02
34	58	67.4	451	1	TBA1_MOUSE TUBULIN ALPHA-1 CHAIN.	2.68e-02
35	58	67.4	451	1	TBA1_HUMAN TUBULIN ALPHA-1 CHAIN,	2.68e-02
36	58	67.4	451	1	TBA3_HOMAM TUBULIN ALPHA-3 CHAIN	2.68e-02
37	58	67.4	451	1	TBA2_MOUSE TUBULIN ALPHA-2 CHAIN.	2.68e-02
38	58	67.4	452	1	TBA1_PARLI TUBULIN ALPHA-1 CHAIN.	2.68e-02
39	58	67.4	452	1	TBA2_PATVU TUBULIN ALPHA-2/ALPHA-	2.68e-02
40	57	66.3	96	1	GRO_MOUSE GROWTH REGULATED PROTE	4.75e-02
41	57	66.3	240	1	TBA_OCTVU TUBULIN ALPHA CHAIN (F	4.75e-02
42	57	66.3	451	1	TBA2_HOMAM TUBULIN ALPHA-2 CHAIN	4.75e-02
43	57	66.3	451	1	TBA_OCTDO TUBULIN ALPHA CHAIN.	4.75e-02
44	57	66.3	1389	1	RPOB_NEIME DNA-DIRECTED RNA POLYM	4.75e-02
45	56	65.1	448	1	TBA5_CHICK TUBULIN ALPHA-5 CHAIN.	8.39e-02

ALIGNMENTS

RESULT	1	STANDARD;	PRT;	107 AA.
ID	M12A_HUMAN			
AC	PI9875;			
DT	01-FEB-1991 (REL. 17, CREATED)			
DT	01-FEB-1991 (REL. 17, LAST SEQUENCE UPDATE)			
DT	01-JUN-1994 (REL. 29, LAST ANNOTATION UPDATE)			
DE	MACROPHAGE INFLAMMATORY PROTEIN-2-ALPHA PRECURSOR (MIP2-ALPHA) (GROWTH			
DE	REGULATED PROTEIN BETA) (GRO-BETA).			
GN	GRO2 OR GROB OR MIP2A.			
OS	HOMO SAPIENS (HUMAN).			
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;			
OC	PRIMATES; CATARRHINI; HOMINIDAE; HOMO.			
RN	[1]			
RP	SEQUENCE FROM N.A.			
RC	TISSUE-HISTIOCYTIC LYMPHOMA;			
RX	MEDLINE; 90354792.			
RA	TEKAMP-OLSON P., GALLEGOS C., BAUER D., MCCLAIN J., SHERRY B.,			
RA	FABRE M., VAN DEVENTER S., CERAMI A.;			
RT	"Cloning and characterization of cDNAs for murine macrophage			
RT	inflammatory protein 2 and its human homologues.";			
RL	J. EXP. MED. 172:911-919(1990).			
RN	[2]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE; 90377259.			
RA	IIDA N., GROTEENDORST G.R.;			
RT	"Cloning and sequencing of a new gro transcript from activated human			
RT	monocytes: expression in leukocytes and wound tissue.";			
RL	MOL. CELL. BIOL. 10:5596-5599(1990).			
RN	[3]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE; 91017578.			
RA	HASKILL S., PEACE A., MORRIS J., SPORN S.A., ANISOWICZ A., LEE S.W.,			
RA	SMITH T., MARTIN G., RALPH P., SAGER R.;			
RT	"Identification of three related human GRO genes encoding cytokine			
RT	functions.";			
RL	PROC. NATL. ACAD. SCI. U.S.A. 87:7732-7736(1990).			
CC	-!- FUNCTION: PRODUCED BY ACTIVATED MONOCYTES AND NEUTROPHILS AND			
CC	EXPRESSED AT SITES OF INFLAMMATION.			
CC	-!- SIMILARITY: BELONGS TO THE INTERCINE ALPHA FAMILY (SMALL CYTOKINE			
CC	C-X-C) (CHEMOKINE CX-C).			

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<p> GROB_BOVIN STANDARD; PRT; 98 AA. O46675; AC 15-DEC-1998 (REL. 37, CREATED) DT 15-DEC-1998 (REL. 37, LAST SEQUENCE UPDATE) DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE) DE GROWTH REGULATED PROTEIN HOMOLOG GAMMA PRECURSOR (GRO-GAMMA). OS BOS TAURUS (BOVINE). OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; OC ARTIODACTYLIA; RUMINANTIA; PECORA; BOVIDAE; BOVINA; BOVINEAE; BOS. RN [1] RP SEQUENCE FROM N.A. RA YOSHIMURA T., MODI W.S.; RL SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS. CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE CC C-X-C) (CHEMOKINE CXCL). CC CC This SWISS-PROT entry is copyright. It is produced through a collaboration CC between the Swiss Institute of Bioinformatics and the EMBL outstation - CC the European Bioinformatics Institute. There are no restrictions on its CC use by non-profit institutions as long as its content is in no way CC modified and this statement is not removed. Usage by and for commercial CC entities requires a license agreement (See http://www.isb-sib.ch/announce/ CC or send an email to license@isb-sib.ch). CC CC EMBL; U95811; G2735497; CC PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1. CC CYTOKINE; GROWTH FACTOR; INFLAMMATORY RESPONSE; SIGNAL. CC SIGNAL 1 29 POTENTIAL. CC CHAIN 30 98 GROWTH REGULATED PROTEIN HOMOLOG GAMMA. CC DISULFID 39 65 BY SIMILARITY. CC DISULFID 41 81 BY SIMILARITY. CC SEQUENCE 98 AA; 10393 MW; ECCC2B4C CRC32; CC CC Query Match 84.9%; Score 73; DB 1; Length 98; CC Best Local Similarity 90.0%; Pred. NO. 2.61e-06; CC Matches 9; Conservative 1; Mismatches 0; Indels 0; Gaps 0; CC CC Ddb 81 CLNPAAPMVK 90 CC CC QY 3 CLNPASPVMK 12 </p>	<p> GROB_BOVIN STANDARD; PRT; 104 AA. O46677; AC 15-DEC-1998 (REL. 37, CREATED) DT 15-DEC-1998 (REL. 37, LAST SEQUENCE UPDATE) DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE) DE GROWTH REGULATED PROTEIN HOMOLOG BETA PRECURSOR (GRO-BETA). OS BOS TAURUS (BOVINE). OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA; OC ARTIODACTYLIA; RUMINANTIA; PECORA; BOVIDAE; BOVINA; BOVINEAE; BOS. RN [1] RP SEQUENCE FROM N.A. RA YOSHIMURA T., MODI W.S.; RL SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS. CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE CC C-X-C) (CHEMOKINE CXCL). CC CC This SWISS-PROT entry is copyright. It is produced through a collaboration CC between the Swiss Institute of Bioinformatics and the EMBL outstation - CC the European Bioinformatics Institute. There are no restrictions on its CC use by non-profit institutions as long as its content is in no way CC modified and this statement is not removed. Usage by and for commercial CC entities requires a license agreement (See http://www.isb-sib.ch/announce/ CC or send an email to license@isb-sib.ch). CC CC EMBL; U95813; G2735497; CC PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1. CC CYTOKINE; GROWTH FACTOR; INFLAMMATORY RESPONSE; SIGNAL. CC SIGNAL 1 30 POTENTIAL. CC CHAIN 31 104 GROWTH REGULATED PROTEIN HOMOLOG BETA. CC DISULFID 40 66 BY SIMILARITY. CC SEQUENCE 104 AA; 10664 MW; ECCC2B4C CRC32; CC CC Query Match 84.9%; Score 73; DB 1; Length 104; CC Best Local Similarity 90.0%; Pred. NO. 2.61e-06; CC Matches 9; Conservative 1; Mismatches 0; Indels 0; Gaps 0; CC CC Ddb 81 CLNPAAPMVK 90 CC CC QY 3 CLNPASPVMK 12 </p>
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FT DISULFID 42 82 BY SIMILARITY.
SQ SEQUENCE 104 AA; 10950 MW; 2C63B23D CRC32;

Query Match 82.6%; Score 71; DB 1; Length 104;
Best Local Similarity 80.0%; Pred. No. 9.48e-06;
Matches 8; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

Db 82 CLNPTAPMK 91
    ||||:||||
Qy 3 CLNPASPMVK 12

RESULT 6
ID GROA_BOVIN STANDARD; PRT; 104 AA.
AC Q46676;
DT 15-DEC-1998 (REL. 37, CREATED)
DT 15-DEC-1998 (REL. 37, LAST SEQUENCE UPDATE)
DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
DE GROWTH REGULATED PROTEIN HOMOLOG ALPHA PRECURSOR (GRO-ALPHA).
OS BOS TAURUS (BOVINE)
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC ARTIODACTYLA; RUMINANTIA; PECORA; BOVIDAE; BOVINAE; BOS.
RN [1]
RP SEQUENCE FROM N.A.
RA YOSHIMURA T., MODI W.S.;
RL SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
    C-X-C) (CHEMOKINE CXCL).
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CC -----
CC
DR EMBL; J03560; G304509; -
DR PIR; B28414; B28414.
DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
DR PFAM; PF00048; i18; 1.
DR HSP; P10889; IML2.
KW CYTOKINE; GROWTH FACTOR; INFLAMMATORY RESPONSE; SIGNAL.
FT SIGNAL 1 28 POTENTIAL.
FT CHAIN 29 101 GRO PROTEIN.
FT DISULFID 37 63 BY SIMILARITY.
FT DISULFID 39 79 BY SIMILARITY.
SQ SEQUENCE 101 AA; 10893 MW; 3F83AD41 CRC32;

Query Match 76.7%; Score 66; DB 1; Length 101;
Best Local Similarity 80.0%; Pred. No. 2.22e-04;
Matches 8; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 78 ACLNPEAPMV 87
    ||||:||||
Qy 2 ACLNPASPMVK 11

RESULT 8
ID GRO1_RABBIT STANDARD; PRT; 71 AA.
AC P30782;
DT 01-JUL-1993 (REL. 26, CREATED)
DT 01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)
DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
DE PERMEABILITY FACTOR 2 (RPF2) (FRAGMENT).
OS ORYCTOLAGUS CUNICULUS (RABBIT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC LAGOMORPHA; LEPORIDAE; ORYCTOLAGUS.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=NEW ZEALAND WHITE; TISSUE=ALVEOLAR MACROPHAGE;
RX MEDLINE; 95129889.
RA JOHNSON M.C., GOODMAN R.B. II, KAJIKAWA O., WONG V.A., MONGOVIN S.M.,
RA MARTIN T.R.;
RT "Cloning of two rabbit GRO homologues and their expression in
RT alveolar macrophages."
RL GENE 151:337-338(1994).
RN [2]
RP SEQUENCE OF 1-36.
RC STRAIN=NEW ZEALAND WHITE; TISSUE=PERITONEAL CAVITY;
RX MEDLINE; 91378900.
RA JOSE P.J., COLLINS P.D., PERKINS J.A., BEAUBIEN B.C., TOTTY N.F.,
RA WATERFIELD M.D., HSUAN J., WILLIAMS T.J.;
RT "Identification of a second neutrophil-chemoattractant cytokine
RT generated during an inflammatory reaction in the rabbit peritoneal
RT cavity in vivo. Purification, partial amino acid sequence and
RT structural relationship to melanoma-growth-stimulatory activity."
RL BIOCHEM. J. 278:493-497(1991).
CC -!- FUNCTION: HAS CHEMOTACTIC ACTIVITY FOR NEUTROPHILS (BY
    SIMILARITY).
CC -!- SUBUNIT: HOMODIMER (PROBABLE).
CC -!- INDUCTION: GENERATED DURING AN INFLAMMATORY REACTION.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
    C-X-C) (CHEMOKINE CXCL).
CC -----
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EMBL; L19157; G309960; -
 DR PIR; S17507; S17507.
 DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; PARTIAL.
 DR PFAM; PF00048; i18; 1.
 DR HSSP; P09341; 1MSH.
 KW CYTOKINE; GROWTH FACTOR; INFLAMMATORY RESPONSE.
 FT DISULFID 7 33
 FT DISULFID 9 49 BY SIMILARITY.
 FT CONFLICT 20 20 N -> S (IN REF. 2).
 FT CONFLICT 23 23 N -> S (IN REF. 2).
 FT NON_TER 71 71
 SQ SEQUENCE 71 AA; 7713 MW; C1371890 CRC32;

Query Match 74.4%; Score 64; DB 1; Length 71;
 Best Local Similarity 81.8%; Pred. No. 7.58e-04;
 Matches 9; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 48 ACRNPAAPVVK 58
 QY 2 ACLNPASPVK 12
 |||:|||||

RESULT 9
 ID GRO_RAT STANDARD; PRT; 96 AA.
 AC P14095;
 DT 01-JAN-1990 (REL. 13, CREATED)
 DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
 DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
 DE GROWTH REGULATED PROTEIN PRECURSOR (CYTOKINE-INDUCED NEUTROPHIL CHEMOATTRACTANT) (CINC-1) (PLATELET-DERIVED GROWTH FACTOR-INDUCIBLE PROTEIN KC).
 DE GRO.
 GN RATTUS NORVEGICUS (RAT).
 OS EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE; 93246259.
 RA KONISHI K., TANAKA Y., YAMAMOTO M., YOMOGIDA K., WATANABE K.,
 RA TSURUFUJI S., FUJIOKA M.;
 RT "Structure of the gene encoding rat neutrophil chemo-attractant Gro.";
 RL GENE 126:285-286(1993).
 RN [2]

RP SEQUENCE FROM N.A.
 RX MEDLINE; 92246987.
 RA HUANG S., PAULAUSKIS J., KOBZIK L.;
 RT "Rat KC cDNA cloning and mRNA expression in lung macrophages and fibroblasts.";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 184:922-929(1992).
 RN [3]
 RP SEQUENCE OF 25-96.
 RX MEDLINE; 90062049.
 RA WATANABE K., KONISHI K., FUJIOKA M., KINOSHITA S., NAKAGAWA H.;
 RT "The neutrophil chemoattractant produced by the rat kidney epitheloid cell line NRK-52E is a protein related to the KC/gro protein.";
 RL J. BIOL. CHEM. 264:19559-19563(1989).
 RN [4]
 RP SEQUENCE OF 36-88 FROM N.A.
 RC STRAIN=CD-1; TISSUE=LUNG;
 RX MEDLINE; 93035653.
 RA HUANG S., PAULAUSKIS J.D., GODLESKI J.J., KOBZIK L.;
 RT "Expression of macrophage inflammatory protein-2 and KC mRNA in pulmonary inflammation.";
 RL AM. J. PATHOL. 141:981-988(1992).
 RN [5]
 RP SEQUENCE OF 25-56.
 RC STRAIN=WISTAR;

RX MEDLINE; 96183056.
 RA NAKAGAWA H., SHIOYA S., TAKANO K., SHIBATA F., KATO H.;
 RT "Cytokine-induced neutrophil chemoattractant (CINC)-2 alpha, a novel member of rat GRO/CINC, is a predominant chemokine produced by lipopolysaccharide-stimulated rat macrophages in culture.";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 220:945-948(1996).
 RN [6]
 RP STRUCTURE BY NMR.
 RX MEDLINE; 95046335.
 RA HANZAWA H., HARUYAMA H., WATANABE K., TSURUFUJI S.;
 RT "The three dimensional structure of rat cytokine CINC/Gro in solution by homonuclear 3D NMR.";
 RL FEBS LETT. 354:207-212(1994).
 RN [7]
 RP STRUCTURE BY NMR.
 RX MEDLINE; 97335927.
 RA HANZAWA H., HARUYAMA H., KONISHI K., WATANABE K., TSURUFUJI S.;
 RT "Subunit association and monomer structure of CINC/Gro revealed by 1H-NMR.";
 RL J. BIOCHEM. 121:835-841(1997).
 RN [8]
 RP STRUCTURE BY NMR.
 RX MEDLINE; 98162936.
 RA HANZAWA H., HARUYAMA H., KONISHI K., WATANABE K., TSURUFUJI S.;
 RT "Solution structure of CINC/Gro investigated by heteronuclear NMR.";
 RL J. BIOCHEM. 123:62-70(1998).
 CC -!- FUNCTION: HAS CHEMOTACTIC ACTIVITY FOR NEUTROPHILS. CONTRIBUTES TO NEUTROPHIL ACTIVATION DURING INFLAMMATION.
 CC -!- SUBUNIT: MONOMER AND HOMODIMER.
 CC -!- TISSUE SPECIFICITY: AT LEAST EXPRESSED IN THE LUNG AND TRACHEA.
 CC -!- INDUCTION: IN LUNG, BY LIPOPOLYSACCHARIDE OR INFLAMMATION.
 CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE C-X-C) (CHEMOKINE CXC).
 CC -----

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EMBL; D11445; G220755; -
 DR EMBL; D11444; G220753; -
 DR EMBL; M86536; G206687; -
 DR EMBL; S45856; E62498; -
 DR PIR; A34481; A34481.
 DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 DR PFAM; PF00048; i18; 1.
 DR HSSP; P09341; 1MSH.
 KW CYTOKINE; GROWTH FACTOR; INFLAMMATORY RESPONSE; SIGNAL.
 FT SIGNAL 1 24
 FT CHAIN 25 96 GROWTH REGULATED PROTEIN.
 FT DISULFID 33 59 BY SIMILARITY.
 FT DISULFID 35 75 BY SIMILARITY.
 SQ SEQUENCE 96 AA; 10249 MW; E49B1A5A CRC32;

Query Match 74.4%; Score 64; DB 1; Length 96;
 Best Local Similarity 70.0%; Pred. No. 7.58e-04;
 Matches 7; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 74 ACLDPEAPV 83
 QY 2 ACLNPASPVK 11
 |||:|||||

RESULT 10
 ID GRO_CAVPO STANDARD; PRT; 104 AA.
 AC O55235;
 DT 15-DEC-1998 (REL. 37, CREATED)
 DT 15-DEC-1998 (REL. 37, LAST SEQUENCE UPDATE)
 DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
 DE GROWTH REGULATED PROTEIN PRECURSOR.


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DR PFAM; PF00048; i18; 1.
KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL; 3D-STRUCTURE.
FT SIGNAL 1 27
FT CHAIN 28 100 MACROPHAGE INFLAMMATORY PROTEIN 2.
FT DISULFID 36 62
FT DISULFID 38 78
SQ SEQUENCE 100 AA; 10621 MW; 333AC6A4 CRC32;

Query Match 69.8%; Score 60; DB 1; Length 100;
Best Local Similarity 54.5%; Pred. No. 8.34e-03;
Matches 6; Conservative 3; Mismatches 2; Indels 0; Gaps 0;

Db 76 KVICDPEAPLV 86
   1 1111111111
Qy 1 KACLNPASPMV 11

RESULT 13
ID PF4L_PIG STANDARD; PRT; 119 AA.
AC P43030;
DT 01-NOV-1995 (REL. 32, CREATED)
DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
DT 01-NOV-1997 (REL. 35, LAST ANNOTATION UPDATE)
DE PLATELET BASIC PROTEIN PRECURSOR (PBP).
GN PBP.
OS SUS SCROFA (PIG).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC ARTIODACTYLA; SUIFORMES; SUINA; SUIDAE; SUS.
RN [1]
RP SEQUENCE FROM N.A., AND SEQUENCE OF 40-119.
RC TISSUE=PLATELET;
RX MEDLINE; 94229068.
RA POWER C.A., PROUDFOOT A.E.I., MAGNENAT E., BACON K., WELLS T.N.C.;
RT "Molecular cloning and characterisation of a neutrophil chemotactic
   protein from porcine platelets.";
RL EUR. J. BIOCHEM. 221:713-719(1994).
CC -1- FUNCTION: CHEMOATTRACTANT FACTOR FOR NEUTROPHILS.
CC -1- MASS SPECTROMETRY: MW=8597.5; METHOD=ELECTROSPRAY; RANGE=40-119.
CC -1- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
   C-X-C) (CHEMOKINE CXCL).
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CC -----
DR EMBL; X77935; G457754; -.
DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
DR PFAM; PF00048; i18; 1.
DR HSP; P02775; INAP.
KW CYTOKINE; GROWTH FACTOR; CHEMOTAXIS; MITOGEN; PLATELET; SIGNAL.
FT SIGNAL 1 33 PROBABLE.
FT PROPEP 34 39
FT CHAIN 40 119 PLATELET BASIC PROTEIN.
FT DISULFID 54 80 BY SIMILARITY.
FT DISULFID 56 96 BY SIMILARITY.
SQ SEQUENCE 119 AA; 12615 MW; 607F3E47 CRC32;

Query Match 68.6%; Score 59; DB 1; Length 119;
Best Local Similarity 50.0%; Pred. No. 1.50e-02;
Matches 6; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

Db 94 KICLDPEAPRIK 105
   1 1111111111
Qy 1 KACLNPASPMVK 12

RESULT 14
ID PF4L_HUMAN STANDARD; PRT; 128 AA.
AC P02775;

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DT 21-JUL-1986 (REL. 01, CREATED)
DT 01-NOV-1991 (REL. 20, LAST SEQUENCE UPDATE)
DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
DE PLATELET BASIC PROTEIN PRECURSOR (PBP) [CONTAINS: CONNECTIVE-TISSUE
   ACTIVATING PEPTIDE III (CTAP-III); LOW-AFFINITY PLATELET FACTOR IV
   (LA-PF4); BETA-THROMBOGLOBULIN (BETA-TG); NEUTROPHIL-ACTIVATING
   PEPTIDE 2 (NAP-2)].
GN PBP OR CTAP3 OR TGB1 OR THGB1.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 91170256.
RA MAJUMDAR S., GONDER D., KOUTSIS B., PONCZ M.;
RT "Characterization of the human beta-thromboglobulin gene. Comparison
   with the gene for platelet factor 4.";
RL J. BIOL. CHEM. 266:5785-5789(1991).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE; 89229374.
RA WENGER R.H., WICKI A.N., WALZ A., KIEFFER N., CLEMETSON K.J.;
RT "Cloning of cDNA coding for connective tissue activating peptide III
   from a human platelet-derived lambda gt11 expression library.";
RL BLOOD 73:1498-1503(1989).
RN [3]
RP SEQUENCE OF 35-53.
RX MEDLINE; 86216117.
RA HOLT J.C., HARRIS M.E., HOLT A.M., LANGE E., HENSCHEN A.,
RA NIEWIAROWSKI S.;
RT "Characterization of human platelet basic protein, a precursor form
   of low-affinity platelet factor 4 and beta-thromboglobulin.";
RL BIOCHEMISTRY 25:1988-1996(1986).
RN [4]
RP SEQUENCE OF 44-66 AND 125-128.
RX MEDLINE; 83144010.
RA CASTOR C.W., MILLER J.W., WALZ D.A.;
RT "Structural and biological characteristics of connective tissue
   activating peptide (CTAP-III), a major human platelet-derived growth
   factor.";
RL PROC. NAT'L. ACAD. SCI. U.S.A. 80:765-769(1983).
RN [5]
RP SEQUENCE OF 48-126.
RX MEDLINE; 78187279.
RA BGG G.S., PEPPER D.S., CHESTERMAN C.N., MORGAN F.J.;
RT "Complete covalent structure of human beta-thromboglobulin.";
RL BIOCHEMISTRY 17:1739-1744(1978).
RN [6]
RP SEQUENCE OF 59-126.
RX MEDLINE; 89193761.
RA WALZ A., BAGGIOLINI M.;
RT "A novel cleavage product of beta-thromboglobulin formed in cultures
   of stimulated mononuclear cells activates human neutrophils.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 159:969-981(1989).
RN [7]
RP SEQUENCE OF 57-68.
RX MEDLINE; 89391960.
RA CASTOR C.W., WALZ D.A., RAGSDALE C.G., HOSSLER P.A., SMITH E.M.,
RA BIGNALL M.C., AARON B.P., MOUNTJOY K.;
RT "Connective tissue activation. XXXIII. Biologically active cleavage
   products of CTAP-III from human platelets.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 163:1071-1078(1989).
RN [8]
RP SEQUENCE OF 59-67.
RX MEDLINE; 90155110.
RA WALZ A., BAGGIOLINI M.;
RT "Generation of the neutrophil-activating peptide NAP-2 from platelet
   basic protein or connective tissue-activating peptide III through
   monocyte proteases.";
RL J. EXP. MED. 171:449-454(1990).
RN [9]
RP SYNTHESIS OF 59-126.
RX MEDLINE; 91175767.

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RA CLARK-LEWIS I., MOSE B., WALZ A., BAGGIOLINI M., SCOTT G.J.,
RA AEBERSOLD R.;
RT "Chemical synthesis, purification, and characterization of two
RT inflammatory proteins, neutrophil activating peptide 1
RT (interleukin-8) and neutrophil activating peptide.,"
RL BIOCHEMISTRY 30:3128-3135(1991).
RN [10]
RP X-RAY CRYSTALLOGRAPHY OF 59-128.
RX MEDLINE: 94307404.
RA KUNGL A.J., MACHUIS M., HUBER R., SCHWER C., LAM C., ASCHAUER H.,
RA EHN G., LINDLEY I.J.D., AUER M.;
RT "Purification, crystallization and preliminary X-ray diffraction
RT analysis of recombinant human neutrophil-activating peptide 2
RT (rhNAP-2).,"
RL FEBS LETT. 347:300-303(1994).
RN [11]
RP X-RAY CRYSTALLOGRAPHY (1.9 ANGSTROMS) OF 59-128.
RX MEDLINE: 95221354.
RA MALKOWSKI M.G., WU J.Y., LAZAR J.B., JOHNSON P.H., EDWARDS B.F.P.;
RT "The crystal structure of recombinant human neutrophil-activating
RT peptide-2 (M6L) at 1.9-A resolution.,"
RL J. BIOL. CHEM. 270:7077-7087(1995).
CC -!- FUNCTION: LA-PP4A STIMULATES DNA SYNTHESIS, MITOSIS, GLYCOLYSIS,
CC INTRACELLULAR CAMP ACCUMULATION, PROSTAGLANDIN E2 SECRETION, AND
CC SYNTHESIS OF HYALURONIC ACID AND SULFATED GLYCOSAMINOGLYCAN. IT
CC ALSO STIMULATES THE FORMATION AND SECRETION OF PLASMINOGEN
CC ACTIVATOR BY HUMAN SYNIOVAL CELLS. NAP-2 IS A POTENT
CC CHEMOATTRACTANT AND ACTIVATOR FOR NEUTROPHILS.
CC -!- SUBUNIT: BETA-THROMBOGLOBULIN IS AN HOMOTETRAMER.
CC -!- PTM: PROTEOLYTIC REMOVAL OF RESIDUES 1-9 PRODUCES THE ACTIVE
CC PEPTIDE CONNECTIVE-TISSUE ACTIVATING PEPTIDE III (CTAP III) (LOW-
CC AFFINITY PLATELET FACTOR IV (LA-PP4)).
CC -!- PTM: PROTEOLYTIC REMOVAL OF RESIDUES 1-13 PRODUCES THE ACTIVE
CC PEPTIDE BETA-THROMBOGLOBULIN, WHICH IS RELEASED FROM PLATELETS
CC ALONG WITH PLATELET FACTOR 4 AND PLATELET-DERIVED GROWTH FACTOR.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CXCL).
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DR EMBL: M54995; G181176; -.
DR PIR: A39546; TGHU.
DR PIR: A24448; A24448.
DR PIR: A37382; A37382.
DR PDB: 1NAP; 19-DEC-95.
DR PDB: 1TVX; 11-JAN-97.
DR SWISS-2DPAGE: P02775; HUMAN.
DR MIM: 121010; -.
DR PROSITE: PS00471; SMALL_CYTOKINES_CXC; 1.
DR PFAM: PF00048; i18; 1.
KW CYTOKINE; CONNECTIVE TISSUE; GROWTH FACTOR; CHEMOTAXIS; MITOGEN;
KW PLATELET; SIGNAL; 3D-STRUCTURE.
FT SIGNAL 1 34
FT CHAIN 35 128 PLATELET BASIC PROTEIN (PBP).
FT CHAIN 44 128 LA-PP4 / CTAP-III.
FT CHAIN 48 128 BETA-THROMBOGLOBULIN.
FT CHAIN 59 128 NAP-2.
FT DISULFID 63 89
FT DISULFID 65 105
SQ SEQUENCE 128 AA; 13894 MW; 15B7D1DF CRC32;

Query Match 68.6%; Score 59; DB 1; Length 128;
Best Local Similarity 50.0%; Pred. No. 1.50e-02;
Matches 6; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

Db 103 KICLDPDAPRIK 114
| | | | | | | |

QY 1 KACLNPASPMVK 12
RESULT 15
ID GCP2_BOVIN STANDARD; PRT; 75 AA.
AC P80221;
DT 01-FEB-1994 (REL. 28, CREATED)
DT 01-FEB-1994 (REL. 28, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE GRANULOCYTE CHEMOTACTIC PROTEIN 2 (GCP-2).
GN SCYB6 OR GCP2.
OS BOS TAURUS (BOVINE).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC ACTIODACTYLA; RUMINANTIA; PECORA; BOVOIDEA; BOVINAE; BOS.
RN [1]
RP SEQUENCE.
RC TISSUE-KIDNEY;
RX MEDLINE: 94001982.
RA PROOST P., WUYTS A., CONINGS R., LENAERTS J.-P., BILLIAU A.,
RA OPDENAKKER G., VAN DAMME J.;
RT "Human and bovine granulocyte chemotactic protein-2: complete amino
RT acid sequence and functional characterization as chemokines.,"
RL BIOCHEMISTRY 32:10170-10177(1993).
CC -!- FUNCTION: CHEMOTACTIC FOR NEUTROPHIL GRANULOCYTES.
CC -!- SUBCELLULAR LOCATION: SECRETED.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CXCL).
DR PIR: B54188; B54188.
DR PROSITE: PS00471; SMALL_CYTOKINES_CXC; 1.
DR PFAM: PF00048; i18; 1.
DR HSP: P02775; INAP.
KW CYTOKINE; CHEMOTAXIS; HEPARIN-BINDING.
FT VARIANT 1 2 MISSING (N-TERMINAL PROCESSING VARIANT).
FT VARIANT 1 7 MISSING (N-TERMINAL PROCESSING VARIANT).
FT VARIANT 1 8 MISSING (N-TERMINAL PROCESSING VARIANT).
FT VARIANT 1 9 MISSING (N-TERMINAL PROCESSING VARIANT).
FT DISULFID 12 38 BY SIMILARITY.
FT DISULFID 14 54 BY SIMILARITY.
SQ SEQUENCE 75 AA; 7931 MW; B747167F CRC32;

Query Match 67.4%; Score 58; DB 1; Length 75;
Best Local Similarity 50.0%; Pred. No. 2.68e-02;
Matches 5; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 54 CLDPEAPLIK 63
| | | | | | | |
QY 3 CLNPASPMVK 12

Search completed: Fri Feb 4 18:09:35 2000
Job time : 7 secs.

W P S R L (TM)

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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 18:08:36 2000; MasPar time 3.62 Seconds
Tabular output not generated. 132.864 Million cell updates/sec

Title: >US-09-150-813-73
Description: (1-12) from US09150813.pep
Perfect Score: 86
Sequence: 1 KACLPASPVMVK 12

Scoring table: PAM 150
Gap 15

Searched: 122810 seqs, 40068593 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: pir60
1:pir1 2:pir2 3:pir3 4:pir4

Statistics: Mean 23.220; Variance 28.384; scale 0.818

pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description	Pred. No.
1	86	100.0	107	2	JH0281	macrophage inflammato
2	79	91.9	107	2	B38290	GRO-gamma precursor
3	77	89.5	107	2	A28414	melanoma growth-stimu
4	66	76.7	101	2	B28414	growth-regulated prot
5	64	74.4	53	2	I64831	gene KC protein - rat
6	64	74.4	96	2	JN0372	neutrophil chemo-attra
7	60	69.8	100	2	JH0200	macrophage inflammato
8	59	68.6	119	2	S42881	platelet basic protei
9	59	68.6	128	1	TGHU	beta-thromboglobulin
10	58	67.4	75	2	B54188	granulocyte chemotact
11	58	67.4	161	1	UBURAL	tubulin alpha chain -
12	58	67.4	371	2	A61275	tubulin alpha-2 chain
13	58	67.4	387	2	S33517	tubulin alpha chain -
14	58	67.4	411	1	UBCHA	tubulin alpha chain -
15	58	67.4	444	2	A56635	tubulin alpha chain -
16	58	67.4	448	2	S25004	tubulin alpha chain -
17	58	67.4	448	2	I77427	tubulin alpha chain -
18	58	67.4	448	2	A25873	tubulin alpha chain -
19	58	67.4	449	2	S00253	tubulin alpha chain -
20	58	67.4	449	2	B26488	tubulin alpha-2 chain
21	58	67.4	449	2	I77428	tubulin alpha chain -
22	58	67.4	450	2	S43138	tubulin alpha chain -
23	58	67.4	450	2	I77426	tubulin alpha chain -

24 58 67.4 450 2 A56622 tubulin alpha chain, 1.11e-01
25 58 67.4 450 2 C26488 tubulin alpha-3 chain 1.11e-01
26 58 67.4 450 2 A26488 tubulin alpha-1 chain 1.11e-01
27 58 67.4 450 2 S21522 tubulin alpha chain - 1.11e-01
28 58 67.4 451 2 C24903 tubulin alpha-3 chain 1.11e-01
29 58 67.4 451 2 A24903 tubulin alpha-1 chain 1.11e-01
30 58 67.4 451 1 UBPGA tubulin alpha chain - 1.11e-01
31 58 67.4 451 2 A48433 tubulin alpha chain - 1.11e-01
32 58 67.4 451 1 UBRTA tubulin alpha chain - 1.11e-01
33 58 67.4 451 2 A23035 tubulin alpha chain (1.11e-01
34 58 67.4 451 2 I77424 tubulin alpha chain - 1.11e-01
35 58 67.4 451 2 I77425 tubulin alpha chain - 1.11e-01
36 58 67.4 451 2 B24903 tubulin alpha-2 chain 1.11e-01
37 58 67.4 451 2 JC4133 tubulin alpha chain, 1.11e-01
38 58 67.4 451 2 I77403 tubulin alpha-1 chain 1.11e-01
39 58 67.4 452 2 S42033 tubulin alpha chain - 1.11e-01
40 58 67.4 452 2 S11207 tubulin alpha chain - 1.11e-01
41 58 67.4 452 2 A60671 tubulin alpha chain - 1.11e-01
42 58 67.4 614 2 S58444 SUP35 protein - Afric 1.11e-01
43 57 66.3 96 2 A32954 gro-alpha precursor - 1.86e-01
44 57 66.3 240 2 A61544 tubulin alpha chain - 1.86e-01
45 57 66.3 451 2 S43425 tubulin alpha chain - 1.86e-01

ALIGNMENTS

RESULT 1
ENTRY JH0281 #type complete
TITLE macrophage inflammatory protein 2 alpha precursor - human
ALTERNATE_NAMES gro-beta; growth regulated protein beta; melanoma growth-stimulatory activity; monocyte adherence-induced protein 2
ORGANISM #formal_name Homo sapiens #common_name man
DATE 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 31-Oct-1997
ACCESSIONS JH0281; A35931; A38290; A60407
REFERENCE JH0200
#authors Tekamp-Olson, P.; Gallegos, C.; Bauer, D.; McClain, J.; Sherry, B.; Fabry, M.; van Deventer, S.; Cerami, A.; J. Exp. Med. (1990) 172:911-919
#journal Cloning and characterization of cDNAs for murine macrophage inflammatory protein 2 and its human homologues.
#cross-references MIM:90354792
#accession JH0281
##molecule_type mRNA
##residues 1-107 #label TEK
##cross-references GB:X53799; NID:G34658; PID:G34659
REFERENCE A35931
#authors Iida, N.; Grotendorst, G.R.
#journal Mol. Cell. Biol. (1990) 10:5596-5599
#title Cloning and sequencing of a new gro transcript from activated human monocytes: expression in leukocytes and wound tissue.
#cross-references MIM:90377259
#accession A35931
##molecule_type mRNA
##residues 1-107 #label IID
##cross-references GB:M57731; GB:M36964; NID:G183626; PID:G183627
REFERENCE A38290
#authors Haskill, S.; Peace, A.; Morris, J.; Sporn, S.A.; Anisowicz, A.; Lee, S.W.; Smith, T.; Martin, G.; Ralph, P.; Sager, R.
#journal Proc. Natl. Acad. Sci. U.S.A. (1990) 87:7732-7736
#title Identification of three related human GRO genes encoding cytokine functions.
#cross-references MIM:91017578
#accession A38290
##molecule_type mRNA
##residues 1-107 #label HAS
##cross-references GB:M36820; NID:G183628; PID:G183629
REFERENCE A60407
#authors Sporn, S.A.; Eierman, D.F.; Johnson, C.E.; Morris, J.; Martin, G.; Ladner, M.; Haskill, S.
#journal J. Immunol. (1990) 144:4434-4441
#title Monocyte adherence results in selective induction of novel

```

genes sharing homology with mediators of inflammation and
tissue repair.
#cross-references MUID:90257367
#accession A60407
##status not compared with conceptual translation
##molecule_type mRNA
##residues 56-107 #label SPO
CLASSIFICATION #superfamily beta-thromboglobulin
KEYWORDS inflammation
FEATURE
1-34 #domain signal sequence #status predicted #label SIG\
35-107 #product macrophage inflammatory protein 2 alpha #status
predicted #label MAT
SUMMARY #length 107 #molecular-weight 11389 #checksum 929
Query Match 100.0%; Score 86; DB 2; Length 107;
Best Local Similarity 100.0%; Pred. No. 1-27e-08;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 83 KACLNPASPMVK 94
| | | | | | | | | |
Qy 1 KACLNPASPMVK 12

RESULT 2
ENTRY #type complete
TITLE GRO-gamma precursor - human
ALTERNATE_NAMES growth-regulated protein gamma; macrophage inflammatory
protein 2 beta
ORGANISM #formal_name Homo sapiens #common_name man
DATE 31-May-1991 #sequence_revision 27-Oct-1995 #text_change
ACCESSION JH0282; B38290; C46519
REFERENCE JH0200
#authors Tekamp-Olson, P.; Gallegos, C.; Bauer, D.; McClain, J.;
Sherry, B.; Fabre, M.; van Deventer, S.; Cerami, A.
#journal J. Exp. Med. (1990) 172:911-919
#title Cloning and characterization of cDNAs for murine macrophage
inflammatory protein 2 and its human homologues.
#cross-references MUID:90354792
#accession JH0282
##molecule_type mRNA
##residues 1-107 #label TEK
##cross-references GB:X53800; NID:g34662; PID:g34663
REFERENCE A38290
#authors Haskill, S.; Peace, A.; Morris, J.; Sporn, S.A.; Anisowicz,
A.; Lee, S.W.; Smith, T.; Martin, G.; Ralph, P.; Sager, R.
#journal Proc. Natl. Acad. Sci. U.S.A. (1990) 87:7732-7736
#title Identification of three related human GRO genes encoding
cytokine functions.
#cross-references MUID:91017578
#accession B38290
##molecule_type mRNA
##residues 1-26, 'G', 29-107 #label HAS
##cross-references GB:M36821; NID:g183632; PID:g183633
REFERENCE A46519
#authors Proost, P.; De Wolf-Peters, C.; Conings, R.; Opdenakker, G.;
Billiau, A.; Van Damme, J.
#journal J. Immunol. (1993) 150:1000-1010
#title Identification of a novel granulocyte chemotactic protein
(GCP-2) from human tumor cells. In vitro and in vivo
comparison with natural forms of GRO, IP-10, and IL-8.
#cross-references MUID:93139489
#accession C46519
##molecule_type protein
##residues 35-52 #label PRO
##experimental_source MG-63 osteosarcoma cells
GENETICS
#map_position qq21
CLASSIFICATION #superfamily beta-thromboglobulin
FEATURE
1-34 #domain signal sequence #status predicted #label SIG\
35-107 #product GRO-gamma #status experimental #label MAT

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SUMMARY #length 107 #molecular-weight 11342 #checksum 2559
Query Match 91.9%; Score 79; DB 2; Length 107;
Best Local Similarity 100.0%; Pred. No. 8.69e-07;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 83 KACLNPASPMV 93
| | | | | | | | | |
Qy 1 KACLNPASPMV 11

RESULT 3
ENTRY #type complete
TITLE melanoma growth-stimulatory activity precursor - human
ALTERNATE_NAMES fibroblast-derived neutrophil-activating protein gamma;
GRO-alpha; growth regulated protein; MGSA; NAP-3 melanoma
mitogenic protein
ORGANISM #formal_name Homo sapiens #common_name man
DATE 30-Jun-1989 #sequence_revision 30-Jun-1989 #text_change
ACCESSION S13669; A28414; S00983; B60401; S03976; A47626; B46519
REFERENCE S13669
#authors Baker, N.E.; Kucera, G.; Richmond, A.
#journal Nucleic Acids Res. (1990) 18:6453
#title Nucleotide sequence of the human melanoma growth stimulatory
activity (MGSA) gene.
#cross-references MUID:91057157
#accession S13669
##status preliminary
##molecule_type DNA
##residues 1-107 #label BAK
##cross-references EMBL:X54489; NID:g34625; PID:g34626
REFERENCE A94184
#authors Anisowicz, A.; Bardwell, L.; Sager, R.
#journal Proc. Natl. Acad. Sci. U.S.A. (1987) 84:7188-7192
#title Constitutive overexpression of a growth-regulated gene in
transformed Chinese hamster and human cells.
#cross-references MUID:88041072
#accession A28414
##molecule_type mRNA
##residues 1-107 #label ANI
##cross-references GB:J03561; NID:g183622; PID:g306806
REFERENCE S00983
#authors Richmond, A.; Balentien, E.; Thomas, H.G.; Flagg, G.;
Barton, D.E.; Spiess, J.; Bordoni, R.; Francke, U.;
Derynck, R.
#journal EMBO J. (1988) 7:2025-2033
#title Molecular characterization and chromosomal mapping of
melanoma growth stimulatory activity, a growth factor
structurally related to beta-thromboglobulin.
#cross-references MUID:88328991
#accession S00983
##molecule_type mRNA
##residues 1-107 #label RIC
##cross-references EMBL:X12510; NID:g34621; PID:g34622
REFERENCE A60401
#authors Schroeder, J.M.; Sticherling, M.; Henneicke, H.H.; Preissner,
W.C.; Christophers, E.
#journal J. Immunol. (1990) 144:2223-2232
#title IL-1alpha or tumor necrosis factor-alpha stimulate release of
three NAP-1/IL-8-related neutrophil chemotactic proteins in
human dermal fibroblasts.
#cross-references MUID:90187866
#accession B60401
##molecule_type protein
##residues 35-42, 'X', 44, 'X', 46-48 #label SCH
##experimental_source dermal fibroblasts
REFERENCE S03975
#authors Golds, E.E.; Mason, P.; Nyirkos, P.
#journal Biochem. J. (1989) 259:585-588
#title Inflammatory cytokines induce synthesis and secretion of gro
protein and a neutrophil chemotactic factor but not
beta-2-microglobulin in human synovial cells and

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fibroblasts.
#cross-references MUID:89246368
#accession S03976
#molecule_type protein
#residues 35-41,'X','X',43-49,'X',51-52,'XX',55-57 #label GOL
REFERENCE A47626
#authors Schroeder, J.M.; Persoon, N.L.M.; Christophers, E.
#journal J. Exp. Med. (1990) 171:1091-1100
#title Lipopolysaccharide-stimulated human monocytes secrete, apart
from neutrophil-activating peptide 1/interleukin 8, a
second neutrophil-activating protein. NH-2-terminal amino
acid sequence identity with melanoma growth stimulatory
activity.
#accession A47626
#molecule_type protein
#residues 35-63,'X','X',65 #label SC2
#experimental_source LPS-stimulated monocytes
REFERENCE A46519
#authors Proost, P.; De Wolf-Peeters, C.; Conings, R.; Opdenakker, G.;
Billiau, A.; Van Damme, J.
#journal J. Immunol. (1993) 150:1000-1010
#title Identification of a novel granulocyte chemotactic protein
(GCP-2) from human tumor cells. In vitro and in vivo
comparison with natural forms of GRO, IP-10, and IL-8.
#cross-references MUID:93139489
#accession B46519
#molecule_type protein
#residues 35-62 #label PRO
#experimental_source MG-63 osteosarcoma cells
GENETICS
#gene GDB:GRO1
#cross-references GDB:120181; OMIM:155730
#map_position 4q21-4q21
CLASSIFICATION #superfamily beta-thromboglobulin
FEATURE
1-34 #domain signal sequence #status predicted #label SIG\
35-107 #product melanoma growth-stimulatory activity #status
experimental #label MAT
SUMMARY #length 107 #molecular-weight 11301 #checksum 1301
Query Match 89.5%; Score 77; DB 2; Length 107;
Best Local Similarity 91.7%; Pred. No. 2.84e-06;
Matches 11; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 83 KACLNPAPIVK 94
QY 1 KACLNPAAPMV 12
|||||:|||||
RESULT 4
ENTRY #type complete
TITLE growth-regulated protein precursor - Chinese hamster
ORGANISM #formal_name Crictetus griseus #common_name Chinese hamster
DATE 30-Jun-1989 #sequence_revision 30-Jun-1989 #text_change
20-Mar-1998
ACCESSIONS B28414
REFERENCE A94184
#authors Anisowicz, A.; Bardwell, L.; Sager, R.
#journal Proc. Natl. Acad. Sci. U.S.A. (1987) 84:7188-7192
#title Constitutive overexpression of a growth-regulated gene in
transformed Chinese hamster and human cells.
#cross-references MUID:88041072
#accession B28414
#molecule_type mRNA
#residues 1-101 #label ANI
#cross-references GB:J03560; NID:g191088; PID:g304509
#note the authors translated the codon CAG for residue 52 as
Glu
CLASSIFICATION #superfamily beta-thromboglobulin
FEATURE
1-23 #domain signal sequence #status predicted #label SIG\
24-101 #product growth-regulated protein #status predicted
#label MAT

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SUMMARY #length 101 #molecular-weight 10893 #checksum 3057
Query Match 76.7%; Score 66; DB 2; Length 101;
Best Local Similarity 80.0%; Pred. No. 1.53e-03;
Matches 8; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
Db 78 ACLNPEAPMV 87
QY 2 ACLNPAAPMV 11
|||||:|||||
RESULT 5
ENTRY #type fragment
TITLE gene KC protein - rat (fragment)
ORGANISM #formal_name Rattus sp. #common_name rat
DATE 02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change
23-Feb-1997
ACCESSIONS I64831
REFERENCE I51886
#authors Huang, S.; Paulauskis, J.D.; Godleski, J.J.; Kobzik, L.
#journal Am. J. Pathol. (1992) 141:981-988
#title Expression of macrophage inflammatory protein-2 and KC mRNA
in pulmonary inflammation.
#cross-references MUID:93035653
#accession I64831
#status preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1-53 #label RES
#cross-references GB:S45856; NID:g257055
GENETICS
#gene KC
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 53 #checksum 8839
Query Match 74.4%; Score 64; DB 2; Length 53;
Best Local Similarity 70.0%; Pred. No. 4.58e-03;
Matches 7; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
Db 39 ACLDPEAPMV 48
QY 2 ACLNPAAPMV 11
|||||:|||||
RESULT 6
ENTRY #type complete
TITLE neutrophil chemo-attractant gro protein precursor - rat
ALTERNATE_NAMES CINC; cytokine-induced neutrophil chemoattractant;
interleukin-8-like chemokine
ORGANISM #formal_name Rattus norvegicus #common_name Norway rat
DATE 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change
08-Sep-1997
ACCESSIONS JN0572; JQ1519; A34481; A48988; B48988; S51214
REFERENCE JN0572
#authors Konishi, K.; Takata, Y.; Yamamoto, M.; Yomogida, K.;
Watanabe, K.; Tsurufuji, S.; Fujioaka, M.
#journal Gene (1993) 126:285-286
#title Structure of the gene encoding rat neutrophil
chemo-attractant Gro.
#cross-references MUID:93246259
#accession JN0572
#molecule_type DNA
#residues 1-96 #label KON
#cross-references DDBJ:D11445; NID:g391854; PID:d1002491; PID:g220755
REFERENCE JQ1519
#authors Huang, S.; Paulauskis, J.D.; Kobzik, L.
#journal Biochem. Biophys. Res. Commun. (1992) 184:922-929
#title Rat KC cDNA cloning and mRNA expression in lung macrophages
and fibroblasts.
#cross-references MUID:92246987
#accession JQ1519
#molecule_type mRNA
#residues 1-32,'S',34-96 #label HUA
#cross-references GB:M86536

```

```

##experimental_source alveolar macrophage
##note the authors translated the codon AGT for residue 33 as
Cys, AAC for residue 46 as Gln
REFERENCE
#authors A34481
#journal Watanabe, K.; Konishi, K.; Fujioka, M.; Kinoshita, S.;
#title Nakagawa, H.
J. Biol. Chem. (1989) 264:19559-19563
#cross-references MUID:19559-19563
#accession JH0200
#molecule_type protein
#residues 25-96 #label WAT
REFERENCE
#authors A48988
#journal Nakagawa, H.; Ikese, A.; Hatakeyama, S.; Kato, H.; Gotoda,
#title T.; Konorita, N.; Watanabe, K.; Miyai, H.
Biochem. Pharmacol. (1993) 45:1425-1430
#cross-references MUID:93228656
#accession A48988
#status preliminary
#molecule_type protein
#residues 25-57 #label NAK
##experimental_source kidney, NRK-49F fibroblasts
##note sequence extracted from NCBI backbone (NCBIP:129132)
#accession B48988
#status preliminary
#molecule_type protein
#residues 25-57 #label NA2
##experimental_source kidney, NRK-49F fibroblasts
##note sequence extracted from NCBI backbone (NCBIP:129131)
REFERENCE
#authors S51214
#journal Hanzawa, H.; Haruyama, H.; Watanabe, K.; Tsurufuji, S.
#title FEBS Lett. (1994) 354:207-212
The three dimensional structure of rat cytokine CINC/Gro in
solution by homonuclear 3D NMR.
#cross-references MUID:95046335
#contents annotation; conformation by (1)H-NMR, residues 25-96
#accession S51214
#molecule_type protein
#residues 25-96 #label HAN
COMMENT This protein has chemotactic activity for neutrophils and has
melanoma growth-stimulating activity.
GENETICS
#gene gro; KC
#introns 24/1; 65/2; 92/2
CLASSIFICATION #superfamily beta-thromboglobulin
KEYWORDS cytokine; disulfide bond
FEATURE
1-24 #domain signal sequence #status predicted #label SIG\
25-96 #product neutrophil chemo-attractant Gro protein #status
experimental #label CYT
SUMMARY #length 96 #molecular-weight 10249 #checksum 5749
Query Match 74.4%; Score 64; DB 2; Length 96;
Best Local Similarity 70.0%; Pred. No. 4.58e-03;
Matches 7; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
Db 74 ACLDPEAPMV 83
QY 2 ACLNPSPMV 11
RESULT 7
ENTRY JH0200 #type complete
TITLE macrophage inflammatory protein 2 precursor - mouse
#formal_name Mus musculus #common_name house mouse
ORGANISM 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change
DATE 08-Sep-1997
ACCESSIONS JH0200; A32190

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JH0200
Tekamp-Olson, P.; Gallegos, C.; Bauer, D.; McClain, J.;
Sherry, B.; Fabre, M.; van Deventer, S.; Cerami, A.
J. Exp. Med. (1990) 172:911-919
#journal Cloning and characterization of cDNAs for murine macrophage
#title Inflammatory protein 2 and its human homologues.
#cross-references MUID:90354792
#accession JH0200
#molecule_type mRNA
#residues 1-100 #label TEK
##cross-references GB:X53798; NID:g53128; PID:g53129
REFERENCE
#authors A32190
#journal Wolpe, S.D.; Sherry, B.; Juers, D.; Davatelis, G.; Yurt,
#title R.W.; Cerami, A.
Proc. Natl. Acad. Sci. U.S.A. (1989) 86:612-616
#cross-references MUID:89098980
#accession A32190
#molecule_type protein
#residues 28-59 #label WOL
CLASSIFICATION #superfamily beta-thromboglobulin
KEYWORDS heparin binding
FEATURE
1-27 #domain signal sequence #status predicted #label SIG\
28-100 #product macrophage inflammatory protein 2 #status
experimental #label MAT
SUMMARY #length 100 #molecular-weight 10621 #checksum 8720
Query Match 69.8%; Score 60; DB 2; Length 100;
Best Local Similarity 54.5%; Pred. No. 3.91e-02;
Matches 6; Conservative 3; Mismatches 2; Indels 0; Gaps 0;
Db 76 KVCLDPEAPLV 86
QY 1 KACLNPSPMV 11
RESULT 8
ENTRY S42881 #type complete
TITLE platelet basic protein - pig
#formal_name Sus scrofa domestica #common_name domestic pig
ORGANISM 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change
DATE 17-Mar-1999
ACCESSIONS S43460; S42881
REFERENCE S43460
#authors Power, C.A.; Proudfoot, A.E.I.; Magnenat, E.; Bacon, K.B.;
#journal Wells, T.N.C.
Eur. J. Biochem. (1994) 221:713-719
#title Molecular cloning and characterisation of a neutrophil
chemotactic protein from porcine platelets.
#cross-references MUID:94229068
#accession S43460
#status preliminary
#molecule_type mRNA
#residues 1-119 #label POW
##cross-references EMBL:X77935; NID:g457753; PID:g457754
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 119 #molecular-weight 12615 #checksum 9198
Query Match 68.6%; Score 59; DB 2; Length 119;
Best Local Similarity 50.0%; Pred. No. 6.60e-02;
Matches 6; Conservative 3; Mismatches 3; Indels 0; Gaps 0;
Db 94 KICLDPEAPRIK 105
QY 1 KACLNPSPMV 12
RESULT 9
ENTRY TGHU #type complete
TITLE beta-thromboglobulin precursor - human
CONTAINS connective-tissue activating peptide III; CTAP-III;

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```

histamine-releasing factor; neutrophil-activating peptide
2; platelet basic protein
#formal_name Homo sapiens #common_name man
30-Apr-1979 #sequence_revision 31-Dec-1992 #text_change
26-Feb-1999
ACCESSIONS
A39546; A37382; A24448; PLO222; A93982; A90411; A60709;
A61240; B61240; A03240; A30159; A33516; S46247
REFERENCE
A39546
#authors
Majumdar, S.; Gonder, D.; Koutsis, B.; Poncz, M.
#journal
J. Biol. Chem. (1991) 266:5785-5789
#title
Characterization of the human beta-thromboglobulin gene.
Comparison with the gene for platelet factor 4.
#cross-references MUID:91170256
#accession
A39546
#molecule_type DNA
#residues 1-128 #label MAJ
#cross-references GB:M54995; NID:g181175; PID:g181176
#note
the authors translated the codon GAT for residue 109 as
Pro
REFERENCE
A37382
#authors
Wenger, R.H.; Wickl, A.N.; Walz, A.; Kieffer, N.; Clemetson,
K.J.
#journal
Blood (1989) 73:1498-1503
#title
Cloning of cDNA coding for connective tissue activating
peptide III from a human platelet-derived lamdagtII
expression library.
#cross-references MUID:89229374
#accession
A37382
#molecule_type mRNA
#residues 1-128 #label WEN
#cross-references GB:M54995; NID:g181175; PID:g181176; GB:M38441
A24448
REFERENCE
A24448
#authors
Holt, J.C.; Harris, M.E.; Holt, A.M.; Lange, E.; Henschen,
A.; Niewiarowski, S.
#journal
Biochemistry (1986) 25:1988-1996
#title
Characterization of human platelet basic protein, a precursor
form of low-affinity platelet factor 4 and
beta-thromboglobulin.
#cross-references MUID:86216117
#accession
A24448
#molecule_type protein
#residues 35-53 #label HOL
REFERENCE
PLO222
#authors
Walz, A.; Baggiolini, M.
#journal
J. Exp. Med. (1990) 171:449-454
#title
Generation of the neutrophil-activating peptide NAP-2 from
platelet basic protein or connective tissue-activating
peptide III through monocyte proteases.
#cross-references MUID:90155110
#accession
PLO222
#molecule_type protein
#residues 54-67 #label WAL
REFERENCE
A93982
#authors
Castor, C.W.; Miller, J.W.; Walz, D.A.
#journal
Proc. Natl. Acad. Sci. U.S.A. (1983) 80:765-769
#title
Structural and biological characteristics of connective
tissue activating peptide (CTAP-III), a major human
platelet-derived growth factor.
#cross-references MUID:83144010
#accession
A93982
#molecule_type protein
#residues 44-66;125-128 #label CAS
REFERENCE
A90411
#authors
Begg, G.S.; Pepper, D.S.; Chesterman, C.N.; Morgan, F.J.
#journal
Biochemistry (1978) 17:1739-1744
#title
Complete covalent structure of human beta-thromboglobulin.
#cross-references MUID:78187279
#accession
A90411
#molecule_type protein
#residues 48-128 #label BEG
REFERENCE
A60709
#authors
Baeza, M.L.; Reddigari, S.R.; Kornfeld, D.; Ramani, N.;
Smith, E.M.; Hossler, P.A.; Fischer, T.; Castor, C.W.;

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Gorevic, P.G.; Kaplan, A.P.
J. Clin. Invest. (1990) 85:1516-1521
#title
Relationship of one form of human histamine-releasing factor
to connective tissue activating peptide-III.
#cross-references MUID:90237229
#accession
A60709
#molecule_type protein
#residues 44-62, 'X', 64-79 #label BAE
REFERENCE
A61240
#authors
Kaplan, A.P.; Baeza, M.; Reddigari, S.; Kuna, P.
#journal
Int. Arch. Allergy Appl. Immunol. (1991) 94:148-153
#title
Histamine-releasing factors.
#cross-references MUID:92040226
#accession
A61240
#molecule_type protein
#residues 44-61, 'XX', 64 #label KAP
#accession
B61240
#molecule_type protein
#residues 59-62, 'X', 64-79 #label KA2
REFERENCE
S46247
#authors
Kungl, A.J.; Machius, M.; Huber, R.; Schwer, C.; Lam, C.;
Aschauer, H.; Ehn, G.; Lindley, I.J.D.; Auer, M.
#journal
FEBS Lett. (1994) 347:300-303
#title
Purification, crystallization and preliminary X-ray
diffraction analysis of recombinant human
neutrophil-activating peptide 2 (rhNAP-2).
#cross-references MUID:94307404
#contents
annotation
#comment
There appears to be a second beta-thromboglobulin-like human gene.
Connective-tissue activating peptides (CTAP) are a group of
proteins capable of activating connective tissue cells. CTAP-I,
-II, -III and -P2, and -PMN are of lymphoid, tumor cell, human
platelet, and polymorphonuclear leukocyte origin, respectively.
CTAP-III, a monomer isolated from platelets, stimulates DNA
synthesis, mitosis, glycolysis, intracellular CAMP accumulation,
prostaglandin E2 secretion, and synthesis of hyaluronic acid and
sulfated glycosaminoglycan. It also stimulates the formation and
secretion of plasminogen activator by human synovial cells.
#comment
Proteolytic removal of the first four residues of CTAP-III produces
the active peptide beta-thromboglobulin, which is released from
platelets along with platelet factor 4 and platelet-derived
growth factor.
GENETICS
#gene
GDB:PPBP; THGB1
#cross-references GDB:127391; OMIM:121010
#map_position 4p12-4q13
#introns
50/1; 95/2
CLASSIFICATION
#superfamily beta-thromboglobulin
#growth_factor; homotetramer; platelet
KEYWORDS
1-34
FEATURE
1-34
35-43
44-128
48-128
59-128
63-89, 65-105
#length 128 #molecular-weight 13894 #checksum 6910
SUMMARY
#domain signal sequence #status predicted #label SIG\
#domain propeptide #status predicted #label PRO\
#product connective-tissue activating peptide III
#status experimental #label CTAP\
#product beta-thromboglobulin #status experimental
#label BTG\
#product neutrophil-activating peptide 2 #status
experimental #label NAP2\
#disulfide_bonds #status experimental
63-89, 65-105 #length 128 #molecular-weight 13894 #checksum 6910
Query Match 68.6%; Score 59; DB 1; Length 128;
Best Local Similarity 50.0%; Pred. No. 6.60e-02;
Matches 6; Conservative 3; Mismatches 3; Indels 0; Gaps 0;
Db 103 KICLDPDAPRIK 114
| | | | | : |
Qy 1 KACLNPASPMVK 12
RESULT 10
ENTRY B54188 #type complete
TITLE granulocyte chemotactic protein, GCP-2 - bovine

```

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ORGANISM      #formal_name Bos primigenius taurus #common_name cattle
DATE          13-Sep-1994 #sequence_revision 18-Nov-1994 #text_change
ACCESSIONS    B54188
REFERENCE      A54188
#authors      Proost, P.; Wuyts, A.; Conings, R.; Lenaerts, J.P.; Billiau,
#journal       A.; Opdenakker, G.; Van Damme, J.
#title         Biochemistry (1993) 32:10170-10177
#cross-references MUID:94001982
#accession     B54188
#status        preliminary
#molecule_type mRNA
#residues      1-75 #label PRO
#experimental_source MDBK cells
#note          sequence extracted from NCBI backbone (NCBIP:137967)
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY        #length 75 #molecular_weight 7931 #checksum 8842

Query Match    67.4%; Score 58; DB 2; Length 75;
Best Local Similarity 50.0%; Pred. No. 1.11e-01;
Matches 5; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 54 CLDPEAPLIK 63
QY 3 CLNPASPMVK 12

RESULT 11
ENTRY  UBORAL #type fragment
TITLE  tubulin alpha chain - sea urchin (Lytechinus pictus)
ORGANISM #formal_name Lytechinus pictus #common_name painted urchin
DATE 27-Nov-1985 #sequence_revision 27-Nov-1985 #text_change
10-Jul-1998
ACCESSIONS A02969
REFERENCE A92958
#authors Alexandraki, D.; Ruderman, J.V.
#journal J. Mol. Evol. (1983) 19:397-410
#title Evolution of alpha- and beta-tubulin genes as inferred by the
#cross-references MUID:84090258
#accession A02969
#molecule_type mRNA
#residues 1-161 #label ALE
CLASSIFICATION #superfamily tubulin
KEYWORDS heterodimer; microtubule
FEATURE 160-161 #cleavage_site Glu-Tyr (tubulin-specific
160-161 #cross-link peptide (Glu-Tyr) (by tubulin-tyrosine
SUMMARY #length 161 #checksum 1974

Query Match    67.4%; Score 58; DB 1; Length 161;
Best Local Similarity 58.3%; Pred. No. 1.11e-01;
Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 3 NACFEFANOMVK 14
QY 1 KACLNPASPMVK 12

RESULT 12
ENTRY  A61275 #type fragments
TITLE  tubulin alpha-2 chain - mouse (fragments)
ORGANISM #formal_name Mus musculus #common_name house mouse
DATE 12-May-1994 #sequence_revision 26-May-1994 #text_change
10-Jul-1998
ACCESSIONS S29013; A61275
REFERENCE S29013

```

```

#authors      Lewis, S.A.; Lee, M.G.S.; Cowan, N.J.
#journal       J. Cell Biol. (1985) 101:852-861
#title         Five mouse tubulin isotypes and their regulated expression
#accession     S29013
#molecule_type mRNA
#residues      20-371 #label LE2
#cross-references EMBL:M28727; NID:9202224; PID:9202225
REFERENCE      A61275
#authors      Edder, B.; Rossier, J.; Le Caer, J.P.; Berwald-Netter, Y.;
#journal       Koulakoff, A.; Gros, F.; Denoulet, P.
#title         J. Cell. Biochem. (1991) 46:134-142
#cross-references MUID:92011952
#accession     A61275
#molecule_type protein
#residues      1-19;355-364,'X',366-368 #label EDD
CLASSIFICATION #superfamily tubulin
KEYWORDS acetyllysine; heterodimer; microtubule
FEATURE 13
365 #binding_site acetyl (Lys) (covalent) #status
370-371 #binding_site polyglutamate (Glu) (covalent) #status
370-371 #cleavage_site Glu-Tyr (tubulin-specific
#carboxypeptidase) #status predicted
#cross-link peptide (Glu-Tyr) (by tubulin-tyrosine
ligase) #status predicted
SUMMARY #length 371 #checksum 133

Query Match    67.4%; Score 58; DB 2; Length 371;
Best Local Similarity 58.3%; Pred. No. 1.11e-01;
Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 213 NACFEFANOMVK 224
QY 1 KACLNPASPMVK 12

RESULT 13
ENTRY  S33517 #type fragment
TITLE  tubulin alpha chain - marbled electric ray (fragment)
ORGANISM #formal_name Torpedo marmorata #common_name marbled electric
ray
DATE 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change
12-Apr-1995
ACCESSIONS S33517
REFERENCE S33517
#authors Ruiz-Avila, L.; Canals, J.M.; Marsal, J.
#submission submitted to the EMBL Data Library, May 1993
#accession S33517
#status preliminary
#molecule_type mRNA
#residues 1-387 #label RUI
#cross-references EMBL:X71980
CLASSIFICATION #superfamily tubulin
SUMMARY #length 387 #checksum 1954

Query Match    67.4%; Score 58; DB 2; Length 387;
Best Local Similarity 58.3%; Pred. No. 1.11e-01;
Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;

Db 293 NACFEFANOMVK 304
QY 1 KACLNPASPMVK 12

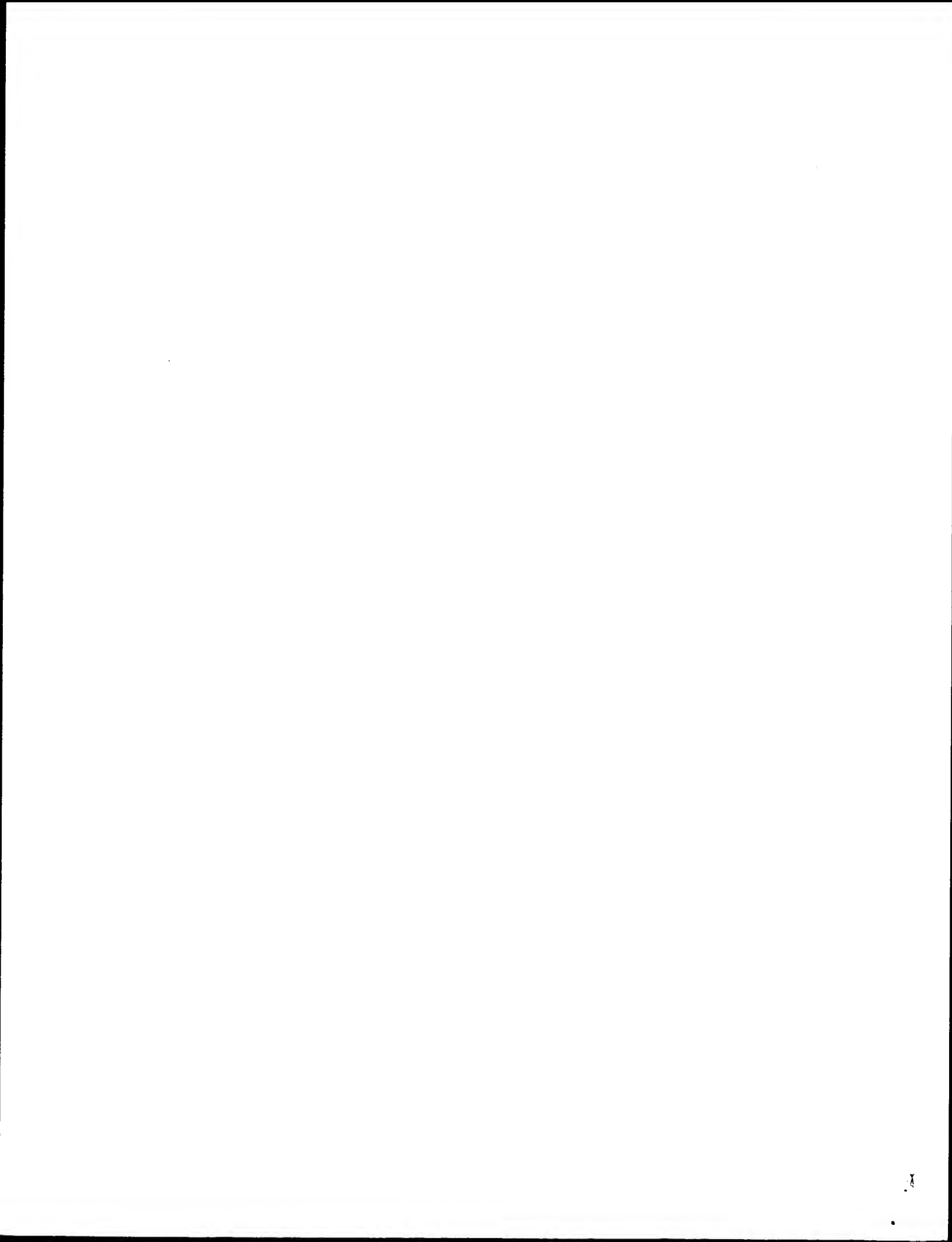
RESULT 14
ENTRY  UBCHA #type fragment
TITLE  tubulin alpha chain - chicken (fragment)
ORGANISM #formal_name Gallus gallus #common_name chicken

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DATE 27-Nov-1985 #sequence_revision 27-Nov-1985 #text_change
17-Jul-1998
ACCESSIONS A02968
REFERENCE A93246
#authors Valenzuela, P.; Quiroga, M.; Zaldivar, J.; Rutter, W.J.;
Kirschner, M.W.; Cleveland, D.W.
#journal Nature (1981) 289:650-655
#title Nucleotide and corresponding amino acid sequences encoded by
alpha and beta tubulin mRNAs.
#cross-references MUID:81123093
#accession A02968
##molecule_type mRNA
##residues 1-411 ##label VAL
##cross-references GB:J00912; NID:g212835; PID:g212836; GB:V00388;
NID:g63069; PID:g63070
CLASSIFICATION #superfamily tubulin
KEYWORDS heterodimer; microtubule
FEATURE
102-108 #region tubulin/FtsZ GTP/GDP-binding (G-G-G-T-G-[ST]-G)
motif\
405 #binding_site polyglutamate (Glu) (covalent) #status
predicted\
410-411 #cleavage_site Glu-Tyr (tubulin-specific
carboxypeptidase) #status predicted\
410-411 #cross-link peptide (Glu-Tyr) (by tubulin-tyrosine
ligase) #status predicted
SUMMARY #length 411 #checksum 7596
Query Match 67.4%; Score 58; DB 1; Length 411;
Best Local Similarity 58.3%; Pred. No. 1.11e-01;
Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;
Db 253 NACFEPANQWVK 264
QY 1 KACLNPASPMVK 12
RESULT 15
ENTRY #type complete
TITLE tubulin alpha chain, brain-specific isotype (clone ptUB5) -
chum salmon
ORGANISM #formal_name Oncorhynchus keta #common_name chum salmon
DATE 11-Aug-1995 #sequence_revision 11-Aug-1995 #text_change
02-Jul-1998
ACCESSIONS A56635
REFERENCE A56635
#authors Coe, I.R.; Munro, R.; Sherwood, N.M.
#journal DNA Seq. (1992) 3:257-262
#title Isolation of different brain-specific isotypes of
alpha-tubulins from chum salmon (Oncorhynchus keta).
#cross-references MUID:93208376
#contents brain
#accession A56635
##status preliminary
##molecule_type mRNA
##residues 1-444 ##label COE
##note sequence inconsistent with nucleotide translation
##note sequence extracted from NCBI backbone (NCBIN:128387,
NCBIP:128388)
CLASSIFICATION #superfamily tubulin
SUMMARY #length 444 #molecular-weight 49270 #checksum 2659
Query Match 67.4%; Score 58; DB 2; Length 444;
Best Local Similarity 58.3%; Pred. No. 1.11e-01;
Matches 7; Conservative 4; Mismatches 1; Indels 0; Gaps 0;
Db 287 NACFEPANQWVK 298
QY 1 KACLNPASPMVK 12
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Search completed: Fri Feb 4 18:09:10 2000
Job time : 34 secs.



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(TM)

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MPsrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 18:08:02 2000; MasPar time 3.55 Seconds
71.844 Million cell updates/sec

Tabular output not generated.

Title: >US-09-150-813-73
Description: (1-12) from US09150813.1.pap
Perfect Score: 86
Sequence: 1 KACLNPASPMVK 12
Scoring table: PAM 150
Gap 15

Searched: 170751 seqs, 2126608 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: a-geneseq35

1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
14:part14 15:part15 16:part16 17:part17 18:part18
19:part19 20:part20 21:part21 22:part22 23:part23
24:part24 25:part25 26:part26 27:part27 28:part28
29:part29 30:part30 31:part31 32:part32 33:part33
34:part34 35:part35 36:part36 37:part37 38:part38
39:part39

Statistics: Mean 16.909; Variance 49.053; scale 0.345

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match %	Length	ID	Description	Pred. No.
1	86	100.0	73	39	human gro-beta polype	3.85e-03
2	86	100.0	73	25	Human chemokine gro b	3.85e-03
3	86	100.0	73	12	Human gro-beta chemok	3.85e-03
4	86	100.0	73	7	MIP-2alpha	3.85e-03
5	86	100.0	73	24	Human chemokine gro b	3.85e-03
6	86	100.0	102	13	Gro-beta/MIP-2-alpha	3.85e-03
7	86	100.0	107	4	Human macrophage infl	3.85e-03
8	86	100.0	107	4	Human Gro beta cytol	3.85e-03
9	86	100.0	107	4	Human macrophage infl	3.85e-03
10	79	91.9	73	39	Human mature gro-gamm	2.90e-02
11	79	91.9	73	23	Chimeric interleukin-	2.90e-02
12	79	91.9	73	12	Human gro-gamma chemo	2.90e-02
13	79	91.9	73	24	Human chemokine gro g	2.90e-02
14	79	91.9	73	25	Human chemokine gro g	2.90e-02
15	79	91.9	73	17	Protein used to gener	2.90e-02
16	79	91.9	73	7	MIP-2beta	2.90e-02

17	79	91.9	106	4	R23035	Human Gro gamma cyto	2.90e-02
18	79	91.9	107	4	R20530	Human macrophage infl	2.90e-02
19	79	91.9	107	13	R70794	Gro-gamma/MIP-2-beta	2.90e-02
20	79	91.9	107	4	R20590	Human macrophage infl	2.90e-02
21	77	89.5	70	20	R99809	Chemokine-like protei	5.13e-02
22	77	89.5	73	25	W18024	Human chemokine gro a	5.13e-02
23	77	89.5	73	39	W81498	Human mature gro-alph	5.13e-02
24	77	89.5	73	12	R66698	Human gro-alpha chemo	5.13e-02
25	77	89.5	73	24	W16700	Human chemokine gro a	5.13e-02
26	77	89.5	101	20	R92318	Chemokine-like protei	5.13e-02
27	77	89.5	107	13	R70792	Melanoma growth stimu	5.13e-02
28	70	81.4	11	20	R99808	Active domain from me	3.69e-01
29	66	76.7	24	11	R58627	Putative glycan bindi	1.12e+00
30	66	76.7	24	35	W70292	GRO alpha	1.12e+00
31	66	76.7	72	23	W12436	Chimeric interleukin-	1.94e+00
32	64	74.4	72	3	R14077	Cytokine and neutroph	5.72e+00
33	60	69.8	100	4	R20528	Murine macrophage inf	5.72e+00
34	60	69.8	100	4	R20588	Murine macrophage inf	5.72e+00
35	60	69.8	100	26	R50790	Macrophage derived in	5.72e+00
36	60	69.8	113	32	R50883	Amino acid sequence o	5.72e+00
37	59	68.6	32	13	R70805	Heparanase C-terminal	7.48e+00
38	59	68.6	70	7	R36775	NAP-2	7.48e+00
39	59	68.6	75	16	R86011	Synthetic NAP-2V	7.48e+00
40	59	68.6	85	13	R70786	CTAP-III heparanase	7.48e+00
41	59	68.6	85	3	P50526	Sequence encoded by s	7.48e+00
42	59	68.6	128	3	R13520	Leukocyte derived gro	7.48e+00
43	59	68.6	128	3	R13519	Leukocyte derived gro	7.48e+00
44	59	68.6	128	1	R05767	Precursor of platelet	7.48e+00
45	59	68.6	135	2	R07984	CTAP(Leu21)/Lamb1-40	7.48e+00

ALIGNMENTS

RESULT 1
ID W81499 standard; Protein; 73 AA.
AC W81499;
DT 01-MAR-1999 (first entry)
DE human gro-beta polypeptide used to treat sepsis.
KW Gro-beta; chemokine; human; sepsis; septic shock; therapy.
OS Mus sp.
FH Key Location/Qualifiers
FT Protein 5..73 /note= "claimed fragment"
FN W09848828-A1.
PD 05-NOV-1998.
PF 29-APR-1998; U08742.
PR 29-APR-1997; US-846966.
PA (SMIK) SMITHKLINE BEECHAM CORP.
PI Demarsh PL, Johanson KO;
DR WPI; 99-024031/02.
PT Treating and preventing sepsis in animals - by using two modified
PT gro b chemokines in conjunction with an anti-infective agent
PS Example 1; Page 18; 26pp; English.
CC This is the amino acid sequence of the human chemokine gro-beta
CC mature polypeptide. The invention relates to a method of
CC preventing and treating sepsis using chemokines selected from
CC mature or modified murine KC (see W81497), or human gro-alpha (see
CC W81498), gro-beta or gro-gamma (see W81499). A claimed method uses
CC a dimeric chemokine consisting of 2 covalently linked modified
CC gro-beta proteins (amino acids 5-73 of the mature polypeptide)
CC in which the proteins are linked by 2 intermolecular disulphide
CC bonds between C5-C31 and C7-C47. Further claimed is administering
CC the chemokine in conjunction with an anti-infective agent. The
CC chemokines described in this invention are required to treat and
CC prevent sepsis since antimicrobial agents alone have failed to
CC abrogate septic mortality.
SQ Sequence 73 AA;

Query Match 100.0%; Score 86; DB 39; Length 73;
Best Local Similarity 100.0%; Pred. No. 3.85e-03;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 kacinpaspvmk 60

PA (SMIK) SMITHKLINE BEECHAM CORP.
 PI King AG, Pelus LM;
 DR WPI; 97-258957/23.
 PT Use of specific chemokine(s) for stem cell mobilisation - useful for
 PT treating myelosuppression or any condition involving
 PT immunosuppression or low levels of haematopoietic cells
 PS Claim 1; Page 21; 31pp; English.
 CC This polypeptide sequence comprises human gro beta. Use of
 CC mammalian chemokines selected from gro alpha (W17670), gro beta,
 CC gro gamma (W17672) or KC (W17669) for mobilising haematopoietic
 CC cells is claimed. The chemokines, optionally used together with a
 CC growth factor or other haematopoietic regulator, are used to treat
 CC myelosuppression or any condition that involves immunosuppression
 CC or low levels of haematopoietic cells, e.g. infection, cancer,
 CC myelopoietic dysfunction, haematopoietic disorders, aplastic anaemia
 CC or autoimmune disease, or low production/differentiation of
 CC haematopoietic or bone marrow cells. A claimed application is in
 CC peripheral blood stem cell transplants in patients being treated by
 CC chemotherapy. Chemokines having an N-terminal deletion are more
 CC active, e.g. by 2 orders of magnitude, than the full-length protein.
 CC When used with a colony stimulating factor (CSF), a synergistic
 CC effect is achieved and the dose, and side-effects, of CSF can be
 CC reduced. Compared with conventional methods of stem cell transplants,
 CC use of mammalian chemokines provides a more rapid release of
 CC peripheral blood mononuclear cells and/or platelets, reducing risk of
 CC infection and allowing use of higher doses of chemotherapeutic
 CC agents.
 SQ Sequence 73 AA;

Query Match 100.0%; Score 86; DB 24; Length 73;
 Best Local Similarity 100.0%; Pred. No. 3.85e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 kaclnpaspvmk 60
 QY 1 KACLNPAASPVMK 12

RESULT 6
 ID R70793 standard; Protein; 102 AA.
 AC R70793;

DT 29-AUG-1995 (first entry)
 DE Gro-beta/MIP-2-alpha.
 KW Macrophage inflammatory protein 2-alpha; gro-beta/MIP-2-alpha;
 KW heparanase; heparin; heparan sulfate; arthritis; restenosis;
 KW cancer; wound healing.
 OS Homo sapiens.
 PN WO9504158-A.
 PD 09-FEB-1995.
 PF 26-JUL-1994; U08207.
 PR 29-JUL-1993; US-099866.
 PR 13-OCT-1993; US-136117.
 PA (UPJO) UPJOHN CO.
 PI Hoogwerf AJ, Ledbetter SR;
 DR WPI; 95-082239/11.
 DR N-PSDB; Q85363.
 PT Screening for cpds. with anti-heparanase activity - by detecting
 PT inhibition of heparin or heparan sulphate degradation,
 PT potentially useful for treating arthritis, restenosis, cancer.
 PS Claim 12; Page 40; 60pp; English.
 CC Purified heparanases, prepared under reducing conditions and
 CC activated with transglutaminase, are given in R70786-804. Most
 CC are prepared by reverse transcription of mRNA from activated human
 CC leukocytes, then cloning of the cDNA into pVL1392 baculovirus
 CC vector, and expression in Sf9 cells in the presence of reduced
 CC glutathione and dithiothreitol.
 SQ Sequence 102 AA;

Query Match 100.0%; Score 86; DB 13; Length 102;
 Best Local Similarity 100.0%; Pred. No. 3.85e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 83 kaclnpaspvmk 94

QY 1 KACLNPAASPVMK 12

RESULT 7
 ID R20529 standard; Protein; 107 AA.
 AC R20529;
 DT 23-APR-1992 (first entry)
 DE Human macrophage inflammatory protein (MIP) 2 alpha.
 KW Inducible; secretory; inflammatory response; cytokine.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT Peptide 1..34
 FT /label= signal
 PN WO9200326-A.
 PN WO9200327-A.
 PD 09-JAN-1992.
 PF 24-JUN-1991; U04482.
 PR 22-JUN-1990; US-541897.
 PR 19-JUN-1991; US-715194.
 PA (CHIR-) CHIRON CORP.
 PI Tekamp-Olson P, Gallegos CA;
 DR WPI; 92-041519/05.
 DR N-PSDB; Q20729.
 PT Human macrophage inflammatory protein 2-alpha - useful in
 PT treating infections, cancer, myelopoietic dysfunction and auto:
 PT immune diseases
 PS Disclosure; Fig 2; 68pp; English.
 CC The sequence was deduced from the DNA sequence obtd. by screening
 CC the U937 cDNA library prepd. from poly-A+ RNA from PMA treated and
 CC LPS stimulated cells, using as probe a fragment isolated from the
 CC mmp-2 cDNA (see Q20728) encoding most of the mature mmp-2 amino
 CC acid sequence. Two classes of human cDNA homologous to mmp-2 were
 CC found designated alpha and beta. The alpha form reproduced here
 CC is claimed in WO9200327; the beta form (Q20530) is claimed in
 CC WO9200326. The alpha form is the more abundant of the two. The
 CC genes can be used to produce recombinant MIP proteins for use in
 CC wound healing, to modulate myelopoiesis and to induce adjuvant
 CC activity.
 CC See also R20588, R20590 and R20528-30.
 SQ Sequence 107 AA;

Query Match 100.0%; Score 86; DB 4; Length 107;
 Best Local Similarity 100.0%; Pred. No. 3.85e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 83 kaclnpaspvmk 94
 QY 1 KACLNPAASPVMK 12

RESULT 8
 ID R23034 standard; Protein; 107 AA.
 AC R23034;
 DT 26-OCT-1992 (first entry)
 DE Human Gro beta cytokine.
 KW Cytokine; inflammatory response; MAD-2; cancer diagnosis;
 KW colonic epithelial tumour cell.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT Peptide 1..35
 FT /label= leader
 FT /note= "putative"
 FT 36..107
 FT /label= Gro_beta
 PN WO9206196-A.
 PD 16-APR-1992.
 PF 24-SEP-1991; U06936.
 PR 28-SEP-1990; US-590223.
 PA (CETU) CETUS CORP.
 PA (UYNC-) UNIV OF NORTH CAROLINA.
 PI Haskill JS, Nitecki DE, Ralph P;
 DR WPI; 92-150882/18.

DR N-PSDB; Q24266.
 PT Gro beta and Gro gamma inflammatory cytokine(s) - for use in
 PT diagnosing colon cancer
 PS Claim 12; Fig 1B; 46pp; English.
 CC The cDNA clone coding for inflammatory cytokine Gro-beta was
 CC isolated from a mezerin- and calcium ionophore-stimulated leukocyte
 CC cDNA library. The amino acid sequence of Gro beta was deduced from
 CC the nucleotide sequence. The level of Gro beta in inflammatory
 CC response cells can be used as an indication of a test substance's
 CC inflammatory activity and to diagnose colon cancer.
 CC See also Q24267.
 SQ Sequence 107 AA;

Query Match 100.0%; Score 86; DB 4; Length 107;
 Best Local Similarity 100.0%; Pred. No. 3.85e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 83 kacInpaspvmk 94
 |||||
 QY 1 KACLNPASPMVK 12

RESULT

ID R20589 standard; Protein; 107 AA.
 AC R20589;
 DT 23-APR-1992 (first entry)
 DE Human macrophage inflammatory protein (MIP) 2 alpha.
 KW Inducible; secretory; inflammatory response; cytokine.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT peptide 1..34
 FT /label= signal
 PN WO9200326-A.
 PN WO9200327-A.
 PD 09-JAN-1992.
 PF 24-JUN-1991; U04478.
 PR 22-JUN-1990; US-541898.
 PR 19-JUN-1991; US-715195.
 PA (CHIR-) CHIRON CORP.
 PI Tekamp-Olson P, Gallegos CA;
 DR WPI; 92-041518/05.
 DR N-PSDB; Q20613.
 DT Human macrophage inflammatory protein 2-alpha - useful in
 PT treating infections, cancer, myeloepoietic dysfunction and auto:
 PT immune diseases
 PS Disclosure; Fig 2; 68pp; English.
 CC The sequence was deduced from the DNA sequence obtd. by screening
 CC the U937 cDNA library prepd. from poly-A+ RNA from PMA treated and
 CC LPS stimulated cells, using as probe a fragment isolated from the
 CC mMIP-2 cDNA (see Q20612) encoding most of the mature mMIP-2 amino
 CC acid sequence. Two classes of human cDNA homologous to mMIP-2 were
 CC found designated alpha and beta. The alpha form reproduced here
 CC is claimed in WO9200327; the beta form (Q20614) is claimed in
 CC WO9200326. The alpha form is the more abundant of the two. The
 CC genes can be used to produce recombinant MIP proteins for use in
 CC wound healing, to modulate myelopoiesis and to induce adjuvant
 CC activity.
 CC See also R20588, R20590 and R20528-30.
 SQ Sequence 107 AA;

Query Match 100.0%; Score 86; DB 4; Length 107;
 Best Local Similarity 100.0%; Pred. No. 3.85e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 83 kacInpaspvmk 94
 |||||
 QY 1 KACLNPASPMVK 12

RESULT

ID W81500 standard; Protein; 73 AA.
 AC W81500;
 DT 01-MAR-1999 (first entry)

DE Human mature gro-gamma polypeptide used to treat sepsis.
 KW Gro-gamma; chemokine; human; sepsis; septic shock; therapy.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT Protein 5..73
 FT /note= "modified fragment, preferred for use in
 FT method of the invention"
 PN WO9848828-A1.
 PD 05-NOV-1998.
 PD 29-APR-1998; U08742.
 PR 29-APR-1997; US-846966.
 PR (SMIK) SMITHKLINE BEECHAM CORP.
 PI Demarsh PL, Johanson KO;
 DR WPI; 99-024031/02.
 DT Treating and preventing sepsis in animals - by using two modified
 PT gro b chemokines in conjunction with an anti-infective agent
 PS Example 1; Page 19; 26pp; English.
 CC This is the amino acid sequence of the human gro-gamma chemokine
 CC mature polypeptide. The invention relates to a method of preventing
 CC and treating sepsis using chemokines selected from mature or
 CC modified murine KC (see W81497), or human gro-alpha (see W81498),
 CC gro-beta (see W81499) or gro-gamma (see W81499). The modified
 CC gro-gamma comprises amino acids 5-73 of the mature polypeptide. A
 CC claimed method uses a dimer composed of 2 modified gro-beta
 CC chemokines. Further claimed is administering the chemokine in
 CC conjunction with an anti-infective agent. The chemokines described
 CC in this invention are required to treat and prevent sepsis since
 CC antimicrobial agents alone have failed to abrogate septic mortality.
 SQ Sequence 73 AA;

Query Match 91.9%; Score 79; DB 39; Length 73;
 Best Local Similarity 100.0%; Pred. No. 2.90e-02;
 Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 kacInpaspvm 59
 |||||
 QY 1 KACLNPASPMV 11

RESULT 11
 ID W12434 standard; peptide; 73 AA.
 AC W12434;
 DT 08-OCT-1997 (first entry)
 DE Chimeric interleukin-8 receptor binding polypeptide G18I32G.
 KW Chimeric; IL-8; receptor mediated biological response; inhibition;
 KW signal transduction; chemokine; human.
 OS Chimeric-Homo sapiens.
 FH Key Location/Qualifiers
 FT region 1..18
 FT /note= "Amino acids 1 to 18 of SEQ ID NO:2 in the
 FT specification from GRO-gamma"
 FT region 19..33
 FT /note= "Amino acids 18 to 32 of SEQ ID NO:1 in the
 FT specification from human interleukin-8"
 FT region 34..73
 FT /note= "Amino acids 34 to 73 of SEQ ID NO:2 in the
 FT specification from GRO-gamma"
 PN WO9700893-A1.
 PD 09-JAN-1997.
 PD 18-JUN-1996; U10536.
 PR 05-APR-1996; US-628893.
 PR 20-JUN-1995; US-493252.
 PR 27-JUN-1995; US-000698.
 PA (CHIR) CHIRON CORP.
 PI Blaney J, Shyamala V, Siani M, Tekamp-Olson P, Wernette-Hammond ME;
 DR WPI; 97-087324/08.
 DT New chimeric interleukin-8 polypeptide(s) - used for modulating IL-8
 PT receptor-mediated biological responses, e.g. inhibiting signal
 PT transduction
 PS Claim 26; Page -; 38pp; English.
 CC The present sequence represents a specifically claimed chimeric
 CC polypeptide G18I32G derived from human interleukin-8 (IL-8) and
 CC GRO-gamma. This polypeptide and similar examples of chimeric

CC chemokines (I46G53I and I18G4I53G) also derived from human IL-8
 CC and GRO-gamma, exhibit a chemokine protein structure capable
 CC of IL8R1 or IL8R2 binding. They can be used for modulating IL8
 CC receptor-mediated biological responses. In particular, they can be
 CC used for inhibiting IL8 receptor signal transduction.
 CC N.B. The present sequence is not shown in the specification but is
 CC derived from SEQ ID NO:1 and 2, see features table.
 SQ Sequence 73 AA;

Query Match 91.9%; Score 79; DB 23; Length 73;

Best Local Similarity 100.0%; Pred. No. 2.90e-02; Mismatches 0; Indels 0; Gaps 0;

Matches 11; Conservative 0;

Db 49 kacInpaspvmv 59

QY 1 KACLNPASPMV 11

RESULT 12
 ID R66700 standard; protein; 73 AA.

AC R66700;
 DT 19-JUL-1995 (first entry)
 DE Human gro-gamma chemokine.
 KW Gro-alpha protein; chemokine; inflammation; antiinflammatory;
 KW hematopoietic synergistic factor; HSF; hematopoietic precursor;
 KW bone marrow; intercrine; desamino gro-gamma; truncation.
 OS Homo sapiens.

FH Key Location/Qualifiers

FT Protein 5..73
 FT /note= "desamino truncated gro-gamma, claim 10,
 FT page 69"

PN WO9429341-A.

PD 22-DEC-1994.

PP 03-JUN-1994; U06264.

PR 08-JUN-1993; US-073800.

PA (SMIK) SMITHKLINE BEECHAM CORP.

PI Balcarek JM, Bhatnagar P, King AG, Pelus LM;

DR WPI; 95-036402/05.

PT New truncated chemokine with increased biological activity - and
 PT related multimers, nucleic acid, antibodies etc. for treating
 PT inflammation, stimulating growth of bone marrow etc., also
 PT peptide(s) for inducing hematopoietic synergistic factor.

PS Disclosure; Page 52; 89pp; English.

CC Truncated, desamino chemokine comprising amino acids 5-73 of

CC human mature gro-gamma (full sequence given in R66700)

CC shows enhanced biological activity when compared to the mature

CC protein, and has been used to prepare multimeric, modified

CC chemokines.

SQ Sequence 73 AA;

Query Match

Best Local Similarity 100.0%; Score 79; DB 12; Length 73;

Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 kacInpaspvmv 59

QY 1 KACLNPASPMV 11

RESULT 13

ID W17672 standard; Protein; 73 AA.

AC W17672;

DT 25-NOV-1997 (first entry)

DE Human chemokine gro gamma.

KW Gro gamma; chemokine; intercrine; myelosuppression;

KW immunosuppression; hematopoietic cell; infection; cancer;

KW aplastic anaemia; autoimmune disease; stem cell transplant;

KW therapy.

OS Homo sapiens.

FH Key Location/Qualifiers

FT Protein 5..73

FT /note= "preferred polypeptide (claim 4)"

PN WO9715595-A1.

PD 01-MAY-1997.
 PF 24-OCT-1996; U17074.
 PR 24-OCT-1995; US-547262.
 PA (SMIK) SMITHKLINE BEECHAM CORP.
 PI King AG, Pelus LM;
 DR WPI; 97-258957/23.
 PT Use of specific chemokine(s) for stem cell mobilisation - useful for
 PT treating myelosuppression or any condition involving
 PT immunosuppression or low levels of haematopoietic cells
 PS Claim 1; Page 21; 31pp; English.
 CC this polypeptide sequence comprises human gro gamma. Use of
 CC mammalian chemokines selected from gro alpha (W17670), gro beta
 CC (W17671), gro gamma or KC (W17669) for mobilising haematopoietic
 CC cells is claimed. The chemokines, optionally used together with a
 CC growth factor or other haematopoietic regulator, are used to treat
 CC myelosuppression or any condition that involves immunosuppression
 CC or low levels of haematopoietic cells, e.g. infection, cancer,
 CC myeloproliferative dysfunction, haematopoietic disorders, aplastic anaemia
 CC or autoimmune disease, or low production/differentiation of
 CC haematopoietic or bone marrow cells. A claimed application is in
 CC peripheral blood stem cell transplants in patients being treated by
 CC chemotherapy. Chemokines having an N-terminal deletion are more
 CC active, e.g. by 2 orders of magnitude, than the full-length protein.
 CC When used with a colony stimulating factor (CSF), a synergistic
 CC effect is achieved and the dose, and side-effects, of CSF can be
 CC reduced. Compared with conventional methods of stem cell transplants,
 CC use of mammalian chemokines provides a more rapid release of
 CC peripheral blood mononuclear cells and/or platelets, reducing risk of
 CC infection and allowing use of higher doses of chemotherapeutic
 CC agents.
 SQ Sequence 73 AA;

Query Match

Best Local Similarity 100.0%; Score 79; DB 24; Length 73;

Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 kacInpaspvmv 59

QY 1 KACLNPASPMV 11

RESULT 14

ID W18026 standard; protein; 73 AA.

AC W18026;

DT 30-JAN-1998 (first entry)

DE Human chemokine gro gamma.

KW Sepsis; septic shock; therapy; gro gamma; chemokine; human.

OS Homo sapiens.

FH Key Location/Qualifiers

FT Protein 5..73

FT /note= "preferred modified fragment of KC
 FT (Claim 5)"

PN WO9719173-A1.

PD 29-MAY-1997.

PF 20-NOV-1996; U18616.

PR 21-NOV-1995; US-007425.

PA (SMIK) SMITHKLINE BEECHAM CORP.

PI DeMarsh PL, Johanson KO;

DR WPI; 97-298111/27.

PT Use of chemokine(s) such as KC and gro-alpha - to treat or prevent
 PT sepsis, particularly septic shock
 PS Claim 1; Page 19-20; 28pp; English.

CC A claimed method of treating or preventing sepsis comprises

CC administering to an animal an effective amount of a chemokine

CC selected from mature murine KC (see W18023), human gro alpha (see

CC W18024), human gro beta (see W18025) and human gro gamma (W18026),

CC comprising fragments of these chemokines and multimeric proteins

CC comprising an association of two chemokine proteins. Sepsis can

CC occur in hospitalised patients, and a consequence of bacterial

CC sepsis is septic shock. The method of the invention provides a

CC treatment for sepsis, particularly septic shock, which is a major

CC cause of death in intensive care units. Septic shock syndrome

CC apparently has intractable resistance to the effects of a variety

CC of highly potent antimicrobial agents. Survival is increased by
 CC treatment with the chemokines, both prophylactically and after
 CC infection.

SQ Sequence 73 AA;

Query Match 91.9%; Score 79; DB 25; Length 73;
 Best Local Similarity 100.0%; Pred. No. 2.90e-02;
 Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 kacInpaspv 59
 |||||
 QY 1 KACLNPSPV 11

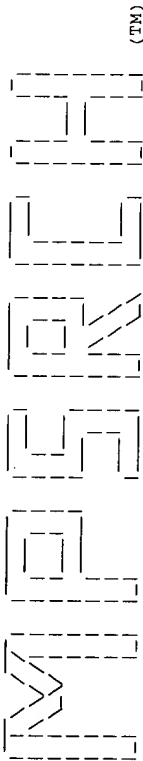
RESULT 15

ID R93194 standard; protein; 73 AA.
 AC R93194;
 DT 31-JUL-1996 (first entry)
 DE Protein used to generate IL-8/Gro(gamma) chimeric peptides.
 KW Native; human; interleukin-8; specific binding domain; receptor;
 KW amino-terminal loop; anti-parallel; beta-sheet; Greek key; substitution;
 KW insertion; deletion; reduction; enhancement; chemo-attractant;
 KW neutrophil; modulation; biological response.
 OS Synthetic.
 PN W09535376-A2.
 PD 28-DEC-1995.
 PF 20-JUN-1995; U07895.
 PR 20-JUN-1994; US-262990.
 PA (CHIR) CHIRON CORP.
 PI Tekamp-Olson P, Venkatakrishna S, Wernette-Hammond ME;
 DR WPI; 96-058413/06.
 PT Interleukin-8 receptor 1 specific binding domain peptide(s) - used
 PT to modulate IL-8R1 mediated biological response
 PS Example 3; Page 42; 51pp; English.
 CC This is the amino acid sequence of a protein (not designated in this
 CC specification but thought to be GRO(gamma), an agonist of the human
 CC interleukin (IL)-8 receptor type R2 (see W092/00326)). The protein was
 CC used to generate GRO(gamma)/IL-8R1 binding domain chimerae by replacing
 CC selected residues from the GRO(gamma) protein with corresp. residues from
 CC IL-8 (R88057). The chimeric proteins were used to generate peptides
 CC comprising an IL-8R2 binding peptide with residues from the specific
 CC binding domain for the IL-8 receptor type R1. These domains are found
 CC in the amino-terminal loop and strand 3 of the 3 stranded anti-parallel
 CC beta-sheet (Greek key) of IL-8. In particular, residues 11 (Lys),
 CC 13 (Tyr), 15 (Lys), 47 (Arg), 48 (Glu), 49 (Leu) and 53 (Pro) of the
 CC native IL-8 are important for binding to the IL-8 R1 receptor.
 CC Substitutions, insertions or deletions of these residues may alter
 CC (reduce or enhance) IL-8 binding to the R1 receptor. Since IL-8 is a
 CC chemo-attractant for neutrophils, the peptides can be used to modulate
 CC an IL-8R1 mediated biological response.
 SQ Sequence 73 AA;

Query Match 91.9%; Score 79; DB 17; Length 73;
 Best Local Similarity 100.0%; Pred. No. 2.90e-02;
 Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 kacInpaspv 59
 |||||
 QY 1 KACLNPSPV 11

Search completed: Fri Feb 4 18:08:20 2000
 Job time : 18 secs.



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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Fri Feb 4 18:15:07 2000; MasPar time 2.54 Seconds
Tabular output not generated. 133.743 Million cell updates/sec

Title: >US-09-150-813-74
Description: (1-12) from US09150813.pep
Perfect Score: 86
Sequence: 1 KACLNPA5PMVQ 12

Scoring table: PAM 150
Gap 15

Searched: 77977 seqs, 28268293 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: swiss-prot37
1:swissprot

Statistics: Mean 23.866; Variance 26.272; scale 0.908

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description	Pred. No.
1	86	100.0	107	1	MI2B_HUMAN MACROPHAGE INFLAMMATOR	8.99e-10
2	79	91.9	107	1	MI2A_HUMAN MACROPHAGE INFLAMMATOR	9.26e-08
3	73	84.9	101	1	GRO_CRIGR GROWTH REGULATED PROTE	4.35e-06
4	71	82.6	96	1	GRO_RAT GROWTH REGULATED PROTE	1.52e-05
5	71	82.6	104	1	GRO_CAVPO GROWTH REGULATED PROTE	1.52e-05
6	70	81.4	107	1	GRO_HUMAN GROWTH REGULATED PROTE	2.84e-05
7	67	77.9	100	1	MIP2_MOUSE MACROPHAGE INFLAMMATOR	1.79e-04
8	66	76.7	98	1	GRO_BOVIN GROWTH REGULATED PROTE	3.27e-04
9	64	74.4	96	1	GRO_MOUSE GROWTH REGULATED PROTE	1.08e-03
10	64	74.4	104	1	GROA_BOVIN GROWTH REGULATED PROTE	1.08e-03
11	62	74.4	104	1	GROB_BOVIN GROWTH REGULATED PROTE	1.08e-03
12	62	72.1	100	1	MIP2_RAT MACROPHAGE INFLAMMATOR	3.51e-03
13	57	66.3	71	1	GRO_RABIT PERMEABILITY FACTOR 2	6.07e-02
14	57	66.3	1389	1	RPOB_NEIME DNA-DIRECTED RNA POLYM	6.07e-02
15	55	64.0	104	1	GRO2_RABIT GROWTH REGULATED PROTE	1.82e-01
16	53	61.6	591	1	GAG_MMTVB GAG POLYPROTEIN [CONTA	5.35e-01
17	53	61.6	591	1	GAG_MMTVC GAG POLYPROTEIN [CONTA	5.35e-01
18	53	61.6	609	1	LKHA_RAT LEUKOTRIENE A-4 HYDROL	5.35e-01
19	52	60.5	119	1	PF4L_PIG PLATELET BASIC PROTEIN	9.06e-01
20	52	60.5	128	1	PF4L_HUMAN PLATELET BASIC PROTEIN	9.06e-01
21	51	59.3	75	1	GCP2_BOVIN GRANULOCYTE CHEMOTACTI	1.52e+00
22	51	59.3	130	1	LIX_RAT CYTOKINE LIX PRECURSOR	1.52e+00
23	51	59.3	161	1	TBA_LYPTI TUBULIN ALPHA CHAIN (F	1.52e+00

24	51	59.3	412	1	TBA1_CHICK TUBULIN ALPHA-1 CHAIN	1.52e+00
25	51	59.3	444	1	TBA_ONCKE TUBULIN ALPHA CHAIN	1.52e+00
26	51	59.3	448	1	TBA4_HUMAN TUBULIN ALPHA-4 CHAIN	1.52e+00
27	51	59.3	449	1	TBA_XENLA TUBULIN ALPHA CHAIN	1.52e+00
28	51	59.3	449	1	TBA2_DROME TUBULIN ALPHA-2 CHAIN	1.52e+00
29	51	59.3	449	1	TBA6_MOUSE TUBULIN ALPHA-6 CHAIN	1.52e+00
30	51	59.3	450	1	TBA_NOTVI TUBULIN ALPHA CHAIN	1.52e+00
31	51	59.3	450	1	TBA1_ONCMY TUBULIN ALPHA CHAIN	1.52e+00
32	51	59.3	450	1	TBA3_DROME TUBULIN ALPHA-3 CHAIN	1.52e+00
33	51	59.3	450	1	TBA1_DROME TUBULIN ALPHA-1 CHAIN	1.52e+00
34	51	59.3	450	1	TBA3_MOUSE TUBULIN ALPHA-3 AND AL	1.52e+00
35	51	59.3	450	1	TBA1_HUMAN TUBULIN ALPHA-1 CHAIN	1.52e+00
36	51	59.3	451	1	TBA_TORMA TUBULIN ALPHA CHAIN (A	1.52e+00
37	51	59.3	451	1	TBA1_MOUSE TUBULIN ALPHA-1 CHAIN	1.52e+00
38	51	59.3	451	1	TBA1_HOMAM TUBULIN ALPHA-1 CHAIN	1.52e+00
39	51	59.3	451	1	TBA1_CRIGR TUBULIN ALPHA-1 CHAIN	1.52e+00
40	51	59.3	451	1	TBA2_MOUSE TUBULIN ALPHA-2 CHAIN	1.52e+00
41	51	59.3	451	1	TBA1_CRIGR TUBULIN ALPHA-1 CHAIN	1.52e+00
42	51	59.3	451	1	TBA2_MOUSE TUBULIN ALPHA-2 CHAIN	1.52e+00
43	51	59.3	452	1	TBA1_PARLI TUBULIN ALPHA-1 CHAIN	1.52e+00
44	51	59.3	452	1	TBA2_PATVU TUBULIN ALPHA-2/ALPHA-	1.52e+00
45	51	59.3	543	1	CP1B_RAT CYTOCHROME P450 1B1 (E	1.52e+00

ALIGNMENTS

RESULT 1
ID MI2B_HUMAN STANDARD; PRT; 107 AA.
AC P19876;
DT 01-FEB-1991 (REL. 17, CREATED)
DT 01-FEB-1991 (REL. 17, LAST SEQUENCE UPDATE)
DT 01-JUN-1994 (REL. 29, LAST ANNOTATION UPDATE)
DE MACROPHAGE INFLAMMATORY PROTEIN-2-BETA PRECURSOR (MIP2-BETA) (GROWTH
DE REGULATED PROTEIN GAMMA) (GRO-GAMMA).
GN GRO3 OR GROG.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=HISTIOCYTIC LYMPHOMA;
RX MEDLINE; 90354792
RA TEKAMP-OLSON P., GALLEGO C., BAUER D., MCCLAIN J., SHERRY B.,
RA FABRE M., VAN DEVENTER S., CERAMI A.;
RT "Cloning and characterization of cDNAs for murine macrophage
RT inflammatory protein 2 and its human homologues.";
RL J. EXP. MED. 172:911-919(1990).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE; 91017578.
RA HASKILL S., PEACE A., MORRIS J., SPORN S.A., ANISOWICZ A., LEE S.W.,
RA SMITH T., MARTIN G., RALPH P., SAGER R.;
RT "Identification of three related human GRO genes encoding cytokine
RT functions.";
RL PROC. NATL. ACAD. SCI. U.S.A. 87:7732-7736(1990).
CC -!- FUNCTION: MAY PLAY A ROLE IN INFLAMMATION AND EXERT ITS EFFECTS
CC ON ENDOTHELIAL CELLS IN AN AUTOCLINE FASHION
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CXC).
CC
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CC
CC -----
CC EMBL; X53800; G34663; -
CC EMBL; X36821; G183633; -
CC PIR; B38290; B38290. -
CC PIR; JH0282; JH0282. -
CC MIM; 139111; -

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DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
DR PFAM; PF00048; i18; 1.
DR HSSP; P09341; IMGs.
KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
FT SIGNAL 1 34
FT CHAIN 35 107 MACROPHAGE INFLAMMATORY PROTEIN
FT 2-BETA.
FT DISULFID 43 69 BY SIMILARITY.
FT DISULFID 45 85 BY SIMILARITY.
FT CONFLICT 27 28 AA -> G (IN REF. 2).
SQ SEQUENCE 107 AA; 11342 MW; 6F2A63D2 CRC32;

Query Match 100.0%; Score 86; DB 1; Length 107;
Best Local Similarity 100.0%; Pred. No. 8.99e-10;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 83 KACLNPASPMVQ 94
QY 1 KACLNPASPMVQ 12

RESULT 2
ID M12A_HUMAN STANDARD; PRT; 107 AA.
AC P19875;
DT 01-FEB-1991 (REL. 17, CREATED)
DT 01-FEB-1991 (REL. 17, LAST SEQUENCE UPDATE)
DT 01-JUN-1994 (REL. 29, LAST ANNOTATION UPDATE)
DE MACROPHAGE INFLAMMATORY PROTEIN-2-ALPHA PRECURSOR (MIP2-ALPHA) (GROWTH
DE REGULATED PROTEIN BETA) (GRO-BETA).
GN GRO2 OR GROB OR MIP2A.
OS HOMO SAPIENS (HUMAN).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-HISTOCYTIC LYMPHOMA;
RX MEDLINE; 90354792.
RA TERAMP-OLSON P., GALLEGO S., BAUER D., MCCLAIN J., SHERRY B.,
RA FABRE M., VAN DEVENTER S., CERAMI A.;
RT "Cloning and characterization of cDNAs for murine macrophage
RT inflammatory protein 2 and its human homologues.";
RL J. EXP. MED. 172:911-919(1990).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE; 90377259.
RA TIDA N., GROTEENDORST G.R.;
RT "Cloning and sequencing of a new gro transcript from activated human
RT monocytes: expression in leukocytes and wound tissue.";
RL MOL. CELL. BIOL. 10:5596-5599(1990).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE; 91017578.
RA HASKILL S., PEACE A., MORRIS J., SPORN S.A., ANISOWICZ A., LEE S.W.,
RA SMITH T., MARTIN G., RALPH P., SAGER R.;
RT "Identification of three related human GRO genes encoding cytokine
RT functions.";
RL PROC. NATL. ACAD. SCI. U.S.A. 87:7732-7736(1990).
CC -!- FUNCTION: PRODUCED BY ACTIVATED MONOCYTES AND NEUTROPHILS AND
CC EXPRESSED AT SITES OF INFLAMMATION.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CXC).
CC -----
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CC -----
CC EMBL; X53799; G34659; -.
CC EMBL; M36820; G183629; -.
CC EMBL; M57731; G183627; -.

DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
DR PFAM; PF00048; i18; 1.
DR HSSP; P09341; IMGs.
KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
FT SIGNAL 1 34
FT CHAIN 35 107 MACROPHAGE INFLAMMATORY PROTEIN
FT 2-BETA.
FT DISULFID 43 69 BY SIMILARITY.
FT DISULFID 45 85 BY SIMILARITY.
FT CONFLICT 27 28 AA -> G (IN REF. 2).
SQ SEQUENCE 107 AA; 11389 MW; 6E431A15 CRC32;

Query Match 91.9%; Score 79; DB 1; Length 107;
Best Local Similarity 100.0%; Pred. No. 9.26e-08;
Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 83 KACLNPASPMV 93
QY 1 KACLNPASPMV 11

RESULT 3
ID GRO_CRIGR STANDARD; PRT; 101 AA.
AC P09340;
DT 01-MAR-1989 (REL. 10, CREATED)
DT 01-MAR-1989 (REL. 10, LAST SEQUENCE UPDATE)
DT 01-DEC-1992 (REL. 24, LAST ANNOTATION UPDATE)
DE GROWTH REGULATED PROTEIN PRECURSOR.
DE GRO.
OS CRICETULUS GRISEUS (CHINESE HAMSTER).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; CRICETINAE; CRICETULUS.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 88041072.
RA ANISOWICZ A., BARDWELL L., SAGER R.;
RT "Constitutive overexpression of a growth-regulated gene in
RT transformed Chinese hamster and human cells.";
RL PROC. NATL. ACAD. SCI. U.S.A. 84:7188-7192(1987).
CC -!- FUNCTION: HAS CHEMOTACTIC ACTIVITY FOR NEUTROPHILS.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CXC).
CC -----
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CC -----
CC EMBL; J03560; G304509; -.
DR PIR; J0281; JH0281.
DR MIN; 139110; -.
DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
DR PFAM; PF00048; i18; 1.
DR HSSP; P09341; IMGs.
KW CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
FT SIGNAL 1 34
FT CHAIN 35 107 MACROPHAGE INFLAMMATORY PROTEIN
FT 2-ALPHA.
FT DISULFID 43 69 BY SIMILARITY.
FT DISULFID 45 85 BY SIMILARITY.
FT CONFLICT 27 28 AA -> G (IN REF. 2).
SQ SEQUENCE 107 AA; 11389 MW; 6E431A15 CRC32;

Query Match 84.9%; Score 73; DB 1; Length 101;
Best Local Similarity 81.8%; Pred. No. 4.35e-06;
Matches 9; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Db 78 ACLNPASPMVQ 88
QY 2 ACLNPASPMVQ 12
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RESULT 4
ID GRO_RAT STANDARD; PRT; 96 AA.
AC P14095;
DT 01-JAN-1990 (REL. 13, CREATED)
DT 01-NOV-1995 (REL. 32, LAST SEQUENCE UPDATE)
DT 15-JUL-1998 (REL. 36, LAST ANNOTATION UPDATE)
DE GROWTH REGULATED PROTEIN PRECURSOR (CYTOKINE-INDUCED NEUTROPHIL
DE CHEMOATTRACTANT) (CINC-1) (PLATELET-DERIVED GROWTH FACTOR-INDUCIBLE
DE PROTEIN KC).
GN GRO.
OS RATTUS NORVEGICUS (RAT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
[1]
RN SEQUENCE FROM N.A.
RX MEDLINE; 93246259.
RA KONISHI K., TANAKA Y., YAMAMOTO M., YOMOGIDA K., WATANABE K.,
RA TSURUFUJI S., FUJIOKA M.;
RT "Structure of the gene encoding rat neutrophil chemo-attractant Gro.";
RL GENE 126:285-286(1993).
[2]
RN SEQUENCE FROM N.A.
RX MEDLINE; 92246987.
RA HUANG S., PAULASKIS J., KOBZIK L.;
RT "Rat KC cDNA cloning and mRNA expression in lung macrophages and
RT fibroblasts.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 184:922-929(1992).
[3]
RN SEQUENCE OF 25-96.
RX MEDLINE; 90062049.
RA WATANABE K., KONISHI K., FUJIOKA M., KINOSHITA S., NAKAGAWA H.;
RT "The neutrophil chemoattractant produced by the rat kidney
RT epithelioid cell line NRK-52E is a protein related to the KC/gro
RT protein.";
RL J. BIOL. CHEM. 264:19559-19563(1989).
[4]
RN SEQUENCE OF 36-88 FROM N.A.
RX STRAIN-CD-1, TISSUE=LUNG;
RX MEDLINE; 93035653.
RA HUANG S., PAULASKIS J.D., GODLESKI J.J., KOBZIK L.;
RT "Expression of macrophage inflammatory protein-2 and KC mRNA in
RT pulmonary inflammation.";
RL AM. J. PATHOL. 141:981-988(1992).
[5]
RN SEQUENCE OF 25-56.
RX STRAIN-WISTAR;
RX MEDLINE; 96183056.
RA NAKAGAWA H., SHIOYA S., TAKANO K., SHIBATA F., KATO H.;
RT "Cytokine-induced neutrophil chemoattractant (CINC)-2 alpha, a novel
RT member of rat GRO/CINC, is a predominant chemokine produced by
RT lipopolysaccharide-stimulated rat macrophages in culture.";
RL BIOCHEM. BIOPHYS. RES. COMMUN. 220:945-948(1996).
[6]
RN STRUCTURE BY NMR.
RX MEDLINE; 95046335.
RA HANZAWA H., HARUYAMA H., WATANABE K., TSURUFUJI S.;
RT "The three dimensional structure of rat cytokine CINC/Gro in solution
RT by homonuclear 3D NMR.";
RL FEBS LETT. 354:207-212(1994).
[7]
RN STRUCTURE BY NMR.
RX MEDLINE; 97335927.
RA HANZAWA H., HARUYAMA H., KONISHI K., WATANABE K., TSURUFUJI S.;
RT "Subunit association and monomer structure of CINC/Gro revealed by
RT 1H-NMR.";
RL J. BIOCHEM. 121:835-841(1997).
[8]
RN STRUCTURE BY NMR.
RX MEDLINE; 98162936.
RA HANZAWA H., HARUYAMA H., KONISHI K., WATANABE K., TSURUFUJI S.;
RT "Solution structure of CINC/Gro investigated by heteronuclear NMR.";
RL J. BIOCHEM. 123:62-70(1998).
-!- FUNCTION: HAS CHEMOTACTIC ACTIVITY FOR NEUTROPHILS. CONTRIBUTES TO
CC

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CC NEUTROPHIL ACTIVATION DURING INFLAMMATION.
CC -!- SUBUNIT: MONOMER AND HOMODIMER.
CC -!- TISSUE SPECIFICITY: AT LEAST EXPRESSED IN THE LUNG AND TRACHEA.
CC -!- INDUCTION: IN LUNG, BY LIPOPOLYSACCHARIDE OR INFLAMMATION.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CXCL).
CC
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CC
CC EMBL; D11445; G220755; -
CC EMBL; D11444; G220753; -
CC EMBL; M8536; G206687; -
CC EMBL; S4585; E62498; -
CC PIR; A34481; A34481.
CC PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
CC PFAM; PF00048; i18; 1.
CC HSP; P09341; IMSG.
CC CYTOKINE; GROWTH FACTOR; INFLAMMATORY RESPONSE; SIGNAL.
KW CHAIN 1 24
FT CHAIN 25 96 GROWTH REGULATED PROTEIN.
FT DISULFID 33 59 BY SIMILARITY.
FT DISULFID 35 75 BY SIMILARITY.
SQ SEQUENCE 96 AA; 10249 MW; E49BIA5A CRC32;
Query Match 82.6%; Score 71; DB 1; Length 96;
Best Local Similarity 72.7%; Pred. No. 1.52e-05;
Matches 8; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
Db 74 ACIDPEAPMVQ 84
QY 2 ACLNPASPMVQ 12
RESULT 5
ID GRO_CAVPO STANDARD; PRT; 104 AA.
AC Q55235;
DT 15-DEC-1998 (REL. 37, CREATED)
DT 15-DEC-1998 (REL. 37, LAST SEQUENCE UPDATE)
DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
DE GROWTH REGULATED PROTEIN PRECURSOR.
GN GRO.
OS CAVIA PORCELLUS (GUINEA PIG).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC RODENTIA; HYSTRICOGNATHI; CAVIADAE; CAVIA.
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN-STRAIN 2;
RA YOSHIMURA T., MODI W.S.;
RL SUBMITTED (JAN-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN-HARTLEY WHITE; TISSUE=SPLEEN;
RA YOSHIMURA T., TAKEYA M., OGATA H., GILLITZER R.;
RL SUBMITTED (MAR-1998) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -!- FUNCTION: HAS CHEMOTACTIC ACTIVITY FOR NEUTROPHILS.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CXCL).
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CC
CC EMBL; U95809; G2735489; -

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DR EMBL; U95810; G2735491; -.
DR EMBL; AF052004; G2981063; -.
DR EMBL; AF052005; G2981065; -.
DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
KW CYTOKINE; GROWTH FACTOR; INFLAMMATORY RESPONSE; SIGNAL.
FT SIGNAL 1 31 POTENTIAL.
FT CHAIN 32 104 GRO PROTEIN.
FT DISULFID 40 66 BY SIMILARITY.
FT DISULFID 42 82 BY SIMILARITY.
SQ SEQUENCE 104 AA; 11069 MW; 859F2A19 CRC32;

Query Match 82.6%; Score 71; DB 1; Length 104;
Best Local Similarity 72.7%; Pred. No. 1.52e-05;
Matches 8; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 81 ACLDPEAPMVQ 91
|||:|||||
QY 2 ACLNPASPMPVQ 12

RESULT 6
ID GRO_HUMAN STANDARD; PRT; 107 AA.
AC P09341;
DT 01-MAR-1989 (REL. 10, CREATED)
DT 01-MAR-1989 (REL. 10, LAST SEQUENCE UPDATE)
DE GROWTH REGULATED PROTEIN PRECURSOR (MELANOMA GROWTH STIMULATORY
DE ACTIVITY) (MGSA) (NEUTROPHIL-ACTIVATING PROTEIN 3) (NAP-3).
GN GRO1 OR GROA OR GRO OR MGSA.
OS HOMO SAPIENS (HUMAN)
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC PRIMATES; CATARRHINI; HOMINIDAE; HOMO.
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE; 88041072.
RA ANISOWICZ A., BARDWELL L., SAGER R.;
RT "Constitutive overexpression of a growth-regulated gene in
RT transformed Chinese hamster and human cells.";
RL PROC. NATL. ACAD. SCI. U.S.A. 84:7188-7192(1987).
RN [2]
RP SEQUENCE FROM N.A.
RX MEDLINE; 88328991.
RA RICHMOND A., BALENTIEN E., THOMAS H.G., FLAGGS G., BARTON D.E.,
RA SPIESS J., BORDONI R., FRANCKE U., DERYNCK R.;
RT "Molecular characterization and chromosomal mapping of melanoma
RT growth stimulatory activity, a growth factor structurally related to
RT beta-thromboglobulin.";
RL EMBO J. 7:2025-2033(1988).
RN [3]
RP SEQUENCE FROM N.A.
RC TISSUE-BLOOD;
RX MEDLINE; 91057157.
RA BAKER N.E., KUCERA G., RICHMOND A.;
RT "Nucleotide sequence of the human melanoma growth stimulatory
RT activity (MGSA) gene.";
RL NUCLEIC ACIDS RES. 18:6453-6453(1990).
RN [4]
RP SEQUENCE OF 35-65.
RX MEDLINE; 90217938.
RA SCHROEDER J.-M., PERSON N.L.M., CHRISTOPHERS E.;
RT "Lipopolysaccharide-stimulated human monocytes secrete, apart from
RT neutrophil-activating peptide 1/interleukin 8, a second neutrophil-
RT activating protein. NH2-terminal amino acid sequence identity with
RT melanoma growth stimulatory activity.";
RL J. EXP. MED. 171:1091-1100(1990).
RN [5]
RP SEQUENCE OF 35-57.
RX MEDLINE; 89246368.
RA GOLDS E.E., MASON P., NYIRKOS P.;
RT "Inflammatory cytokines induce synthesis and secretion of gro protein
RT and a neutrophil chemotactic factor but not beta 2-microglobulin in
RT human synovial cells and fibroblasts.";
RL BIOCHEM. J. 259:585-588(1989).

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RN [6]
RP POSSIBLE FUNCTION.
RX MEDLINE; 89356650.
RA WEN D., ROWLAND A., DERYNCK R.;
RT "Expression and secretion of gro/MGSA by stimulated human endothelial
RT cells.";
RL EMBO J. 8:1761-1766(1989).
RN [7]
RP STRUCTURE BY NMR.
RX MEDLINE; 93387459.
RA FAIRBROTHER W.J., REILLY D., COLBY T., HORUK R.;
RT "1H assignment and secondary structure determination of human
RT melanoma growth stimulating activity (MGSA) by NMR spectroscopy.";
RL FEBS LETT. 330:302-306(1993).
RN [8]
RP STRUCTURE BY NMR.
RX MEDLINE; 94376296.
RA FAIRBROTHER W.J., REILLY D., COLBY T., HESSELGESSER J., HORUK R.;
RT "The solution structure of melanoma growth stimulating activity.";
RL J. MOL. BIOL. 242:252-270(1994).
RN [9]
RP STRUCTURE BY NMR.
RX MEDLINE; 95105175.
RA KIM K.S., CLARK-LEWIS I., SYKES B.D.;
RT "Solution structure of GRO/melanoma growth stimulatory activity
RT determined by 1H NMR spectroscopy.";
RL J. BIOL. CHEM. 269:32909-32915(1994).
CC -!- FUNCTION: HAS CHEMOTACTIC ACTIVITY FOR NEUTROPHILS. MAY PLAY A
CC ROLE IN INFLAMMATION AND EXERTS ITS EFFECTS ON ENDOTHELIAL CELLS
CC IN AN AUTOCRINE FASHION.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CXC).
CC -----
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CC -----
DR EMBL; J03561; G306806; -.
DR EMBL; X12510; G34622; -.
DR EMBL; X54489; G34626; -.
DR PIR; A28414; A28414.
DR PIR; S00983; S00983.
DR PIR; S03976; S03976.
DR PIR; S13669; S13669.
DR PDB; 1MSG; 30-SEP-94.
DR PDB; 1MSG; 31-MAR-95.
DR PDB; 1MSH; 31-MAR-95.
DR MIM; 155730; -.
DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
DR PFAM; PF00048; i18; 1.
KW CYTOKINE; GROWTH FACTOR; INFLAMMATORY RESPONSE; SIGNAL; 3D-STRUCTURE.
FT SIGNAL 1 34
FT CHAIN 35 107 GRO PROTEIN.
FT DISULFID 43 69
FT DISULFID 45 85
SQ SEQUENCE 107 AA; 11301 MW; 4DEE921B CRC32;

Query Match 81.4%; Score 70; DB 1; Length 107;
Best Local Similarity 90.9%; Pred. No. 2.84e-05;
Matches 10; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 83 KACLNPAISPV 93
|||||||:|
QY 1 KACLNPAISPV 11

RESULT 7
ID MIP2_MOUSE STANDARD; PRT; 100 AA.
AC P10889;

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DT	01-JUL-1989	(REL. 11, CREATED)		
DT	01-FEB-1991	(REL. 17, LAST SEQUENCE UPDATE)		
DT	15-JUL-1998	(REL. 36, LAST ANNOTATION UPDATE)		
DE	MACROPHAGE INFLAMMATORY PROTEIN 2 PRECURSOR (MIP2).			
DE	MIP2 OR MIP-2.			
GN	GN			
OS	MUS MUSCULUS (MOUSE).			
OC	EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;			
OC	RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; MUS.			
RP	[1]			
RP	SEQUENCE FROM N.A.			
RP	MEDLINE: 90354792.			
RX	RA			
RA	TEKAMP-OLSON P., GALLEGOS C., BAUER D., MCCLAIN J., SHERRY B.,			
RA	FABRE M., VAN DEVENTER S., CERAMI A.;			
RT	"Cloning and characterization of cDNAs for murine macrophage			
RT	inflammatory protein 2 and its human homologues.";			
RL	J. EXP. MED. 172:911-919(1990).			
RL	[2]			
RN	PROC. NATL. ACAD. SCI. U.S.A. 86:612-616(1989).			
RN	[3]			
RP	STRUCTURE BY NMR.			
RP	MEDLINE: 98283558.			
RX	RA			
RA	SHAO W., JERVA L.F., WEST J., LOLLIS E., SCHWEITZER B.I.;			
RT	"Solution structure of murine macrophage inflammatory protein-2.";			
RL	BIOCHEMISTRY 37:8303-8313(1998)			
CC	-1- FUNCTION: CHEMOTACTIC FOR HUMAN POLYMORPHONUCLEAR LEUKOCYTES BUT			
CC	DOES NOT INDUCE CHEMOKINESIS OR AN OXIDATIVE BURST.			
CC	-1- SUBUNIT: HOMOTETRAMER.			
CC	-1- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE			
CC	C-X-C) (CHEMOKINE CXCL).			
CC	-----			
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CC	or send an email to license@isb-sib.ch).			
CC	-----			
DR	EMBL: X53798; G53129; .			
DR	PIR: JH0200; JH0200.			
DR	PDB: 1MI2; 29-APR-98.			
DR	MGD: MGI:96991; MIP2.			
DR	PROSITE: PS00471; SMALL_CYTOKINES_CXC; 1.			
DR	PFAM: PF00048; 116; 1.			
KW	CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL; 3D-STRUCTURE.			
FT	SIGNAL 1 27			
FT	CHAIN 28 100 MACROPHAGE INFLAMMATORY PROTEIN 2.			
FT	DISULFID 35 62			
FT	DISULFID 38 78			
FT	SEQUENCE 100 AA; 10621 MW; 333AC6A4 CRC32;			
SQ				
Query Match 77.9%; Score 67; DB 1; Length 100;				
Best Local Similarity 58.3%; Pred. No. 1.79e-04;				
Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;				

Db	76 KVCLEDPEAPLVQ 87			
Qy	1 KACLNPAAPMVQ 12			

RESULT	8			
ID	GROB_BOVIN	STANDARD; PRT; 98 AA.		
AC	O46675;			
DT	15-DEC-1998 (REL. 37, CREATED)			
DT	15-DEC-1998 (REL. 37, LAST SEQUENCE UPDATE)			
DT	15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)			
DE	GROWTH REGULATED PROTEIN HOMOLOG GAMMA PRECURSOR (GRO-GAMMA).			
OS	BOS TAURUS (BOVINE).			

control LPS-induced KC gene transcription in mouse macrophages.";
 RL J. IMMUNOL. 155:3593-3600(1995).
 CC -1- FUNCTION: HAS CHEMOTACTIC ACTIVITY FOR NEUTROPHILS. CONTRIBUTES TO
 CC NEUTROPHIL ACTIVATION DURING INFLAMMATION (BY SIMILARITY).
 CC -1- INDUCTION: BY PLATELET-DERIVED GROWTH FACTOR. IN LUNG, BY
 CC LIPOPOLYSACCHARIDE OR INFLAMMATION (BY SIMILARITY).
 CC -1- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).
 CC -----
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 CC -----
 CC EMBL; J04596; G201043; -;
 CC EMBL; U20634; G706843; -;
 CC EMBL; U20527; G706843; JOINED.
 CC EMBL; S79767; E220978; -;
 CC PIR; A32954; A32954;
 CC PIR; JH0081; JH0081;
 CC MGD; MGI:108068; GROI.
 CC PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 CC PFAM; PF00048; 118; 1.
 CC HSP; P09341; 1NSH.
 CC CYTOKINE; GROWTH FACTOR; INFLAMMATORY RESPONSE; SIGNAL.
 CC SIGNAL 1 24 PROBABLE
 CC CHAIN 25 96 GROWTH REGULATED PROTEIN.
 CC DISULFID 33 59 BY SIMILARITY.
 CC DISULFID 35 75 BY SIMILARITY.
 CC SEQUENCE 96 AA; 10254 MW; 36FDD348 CRC32;
 CC -----
 CC Query Match 74.4%; Score 64; DB 1; Length 96;
 CC Best Local Similarity 63.6%; Pred. No. 1.08e-03;
 CC Matches 7; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
 CC -----
 Db 74 ACLDPEAPLVQ 84
 QY 2 ACLNPASPMVQ 12
 CC -----
 RESULT 10
 ID GROA_BOVIN STANDARD; PRT; 104 AA.
 AC O46676;
 DT 15-DEC-1998 (REL. 37, CREATED)
 DT 15-DEC-1998 (REL. 37, LAST SEQUENCE UPDATE)
 DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
 DE GROWTH REGULATED PROTEIN HOMOLOG ALPHA PRECURSOR (GRO-ALPHA).
 OS BOS TAURUS (BOVINE).
 CC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC ARTIODACTYLA; RUMINANTIA; PECORA; BOVIDAE; BOVINAE; BOS.
 CC [1]
 CC SEQUENCE FROM N.A.
 RA YOSHIMURA T., MODI W.S.;
 RL SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 CC -1- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).
 CC -----
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 CC -----
 CC EMBL; U95812; G2735495; -;
 CC PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 CC CYTOKINE; GROWTH FACTOR; INFLAMMATORY RESPONSE; SIGNAL.
 CC SIGNAL 1 30 POTENTIAL.
 CC CHAIN 31 104 GROWTH REGULATED PROTEIN HOMOLOG ALPHA.
 CC -----

FT DISULFID 40 66 BY SIMILARITY.
 FT DISULFID 42 82 BY SIMILARITY.
 SQ SEQUENCE 104 AA; 10984 MW; CCFD567E CRC32;
 CC -----
 CC Query Match 74.4%; Score 64; DB 1; Length 104;
 CC Best Local Similarity 77.8%; Pred. No. 1.08e-03;
 CC Matches 7; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
 CC -----
 Db 82 CLNPAPMV 90
 QY 3 CLNPASPMV 11
 CC -----
 RESULT 11
 ID GROB_BOVIN STANDARD; PRT; 104 AA.
 AC O46677;
 DT 15-DEC-1998 (REL. 37, CREATED)
 DT 15-DEC-1998 (REL. 37, LAST SEQUENCE UPDATE)
 DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
 DE GROWTH REGULATED PROTEIN HOMOLOG BETA PRECURSOR (GRO-BETA).
 OS BOS TAURUS (BOVINE).
 CC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC ARTIODACTYLA; RUMINANTIA; PECORA; BOVIDAE; BOVINAE; BOS.
 CC [1]
 CC SEQUENCE FROM N.A.
 RA YOSHIMURA T., MODI W.S.;
 RL SUBMITTED (MAR-1997) TO EMBL/GENBANK/DBJ DATA BANKS.
 CC -1- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 CC C-X-C) (CHEMOKINE CXCL).
 CC -----
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 CC -----
 CC EMBL; U95813; G2735497; -;
 CC PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 CC CYTOKINE; GROWTH FACTOR; INFLAMMATORY RESPONSE; SIGNAL.
 CC SIGNAL 1 30 POTENTIAL.
 CC CHAIN 31 104 GROWTH REGULATED PROTEIN HOMOLOG BETA.
 CC DISULFID 40 66 BY SIMILARITY.
 CC DISULFID 42 82 BY SIMILARITY.
 SQ SEQUENCE 104 AA; 10950 MW; 2C63B23D CRC32;
 CC -----
 CC Query Match 74.4%; Score 64; DB 1; Length 104;
 CC Best Local Similarity 77.8%; Pred. No. 1.08e-03;
 CC Matches 7; Conservative 2; Mismatches 0; Indels 0; Gaps 0;
 CC -----
 Db 82 CLNPAPMV 90
 QY 3 CLNPASPMV 11
 CC -----
 RESULT 12
 ID MIP2_RAT STANDARD; PRT; 100 AA.
 AC P30348;
 DT 01-APR-1993 (REL. 25, CREATED)
 DT 01-APR-1993 (REL. 25, LAST SEQUENCE UPDATE)
 DT 01-OCT-1996 (REL. 34, LAST ANNOTATION UPDATE)
 DE MACROPHAGE INFLAMMATORY PROTEIN 2 PRECURSOR (MIP2) (CINC-3).
 GN MIP2 OR MIP-2.
 OS RATTUS NORVEGICUS (RAT).
 CC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 CC RODENTIA; SCIUROGNATHI; MURIDAE; MURINAE; RATTUS.
 CC [1]
 CC SEQUENCE FROM N.A.
 RA STRAIN-FISHER 344; TISSUE=LUNG;
 RA DRISCOLL K.;
 RL SUBMITTED (APR-1992) TO EMBL/GENBANK/DBJ DATA BANKS.
 RN [2]

RP SEQUENCE FROM N.A.
 RC STRAIN=FISHER;
 RX MEDLINE; 95189993.
 RA FENG L., XIA Y., YOSHIMURA T., WILSON C.B.;
 RT "Modulation of neutrophil influx in glomerulonephritis in the rat
 RL with anti-macrophage inflammatory protein-2 (MIP-2) antibody";
 RN J. CLIN. INVEST. 95:1009-1017(1995).
 [3]
 RP SEQUENCE FROM N.A.
 RC STRAIN=CD; TISSUE=LUNG;
 RA FARONE A., FARONE M., SHI M.M., KOBZIK L., PAULASKIS J.D.;
 RL SUBMITTED (MAR-1996) TO EMBL/GENBANK/DDJB DATA BANKS.
 [4]
 RP SEQUENCE OF 39-91 FROM N.A.
 RC STRAIN=CD-1; TISSUE=LUNG;
 RX MEDLINE; 93035653.
 RA HUANG S., PAULASKIS J.D., GODLESKI J.J., KOBZIK L.;
 RT "Expression of macrophage inflammatory protein-2 and KC mRNA in
 RL pulmonary inflammation";
 RN AM. J. PATHOL. 141:981-988(1992).
 [5]
 RP SEQUENCE OF 32-100.
 RC STRAIN=WISTAR;
 RX MEDLINE; 94318061.
 RA NAKAGAWA H., KOMORITA N., SHIBATA F., IKESUE A., KONISHI K.,
 RT FUJIOKA M., KATO H.;
 RL "Identification of cytokine-induced neutrophil chemoattractants
 (CINC), rat GRO/CINC-2 alpha and CINC-2 beta, produced by granulation
 tissue in culture: purification, complete amino acid sequences and
 characterization";
 RN BIOCHEM. J. 301:545-550(1994).
 [6]
 RP SEQUENCE OF 32-59.
 RC STRAIN=WISTAR;
 RX MEDLINE; 96183056.
 RA NAKAGAWA H., SHIOTA S., TAKANO K., SHIBATA F., KATO H.;
 RT "Cytokine-induced neutrophil chemoattractant (CINC)-2 alpha, a novel
 member of rat GRO/CINCs, is a predominant chemokine produced by
 lipopolysaccharide-stimulated rat macrophages in culture";
 RL BIOCHEM. BIOPHYS. RES. COMMUN. 220:945-948(1996).
 CC -1- FUNCTION: CHEMOTACTIC FOR HUMAN POLYMORPHONUCLEAR LEUKOCYTES BUT
 CC DOES NOT INDUCE CHEMOKINESIS OR AN OXIDATIVE BURST. CONTRIBUTES TO
 CC NEUTROPHIL ACTIVATION DURING INFLAMMATION.
 CC -1- SUBUNIT: HOMOTETRAMER.
 CC -1- TISSUE SPECIFICITY: AT LEAST EXPRESSED IN THE LUNG AND TRACHEA.
 CC -1- INDUCTION: IN LUNG, BY LIPOPOLYSACCHARIDE OR INFLAMMATION.
 CC -1- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 C-X-C) (CHEMOKINE CX-C).
 CC -----
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 CC -----
 CC EMBL; X65647; G56666;
 DR EMBL; S77604; G998407;
 DR EMBL; U45965; G1228141;
 DR EMBL; S45855; E62497;
 DR PIR; S21467; S21467;
 DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
 DR PFAM; PF000048; i18; 1.
 DR HSSP; P10889; 1M12.
 DR CYTOKINE; CHEMOTAXIS; INFLAMMATORY RESPONSE; SIGNAL.
 FT SIGNAL 1 31
 FT CHAIN 32 100 MACROPHAGE INFLAMMATORY PROTEIN 2.
 FT DISULFID 36 62 BY SIMILARITY.
 FT DISULFID 38 78 BY SIMILARITY.
 SQ SEQUENCE 100 AA; 10783 MW; 1AE9A34E CRC32;
 Query Match 72.18; Score 62; DB 1; Length 100;

Best Local Similarity 70.0%; Pred. No. 3 51e-03;
 Matches 7; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
 Db 78 CLNPEAPLVQ 87
 Qy 3 CLNFPSPMVQ 12
 ||||:|:|
 RESULT 13
 ID GROL_RABIT STANDARD; PRT; 71 AA.
 AC P30782;
 DT 01-JUL-1993 (REL. 26, CREATED)
 DT 01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)
 DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
 DE PERMEABILITY FACTOR 2 (RPF2) (FRAGMENT).
 OS ORYCTOLAGUS CUNICULUS (RABBIT).
 OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
 OC LAGOMORPHA; LEPORIDAE; ORYCTOLAGUS.
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=NEW ZEALAND WHITE; TISSUE=ALVEOLAR MACROPHAGE;
 RX MEDLINE; 95129889.
 RA JOHNSON M.C., GOODMAN R.B. II, KAJIKAWA O., WONG V.A., MONGOVIN S.M.,
 RA MARTIN T.R.;
 RT "Cloning of two rabbit GRO homologues and their expression in
 RL alveolar macrophages";
 RN GENE 151:337-338(1994).
 [2]
 RP SEQUENCE OF 1-36.
 RC STRAIN=NEW ZEALAND WHITE; TISSUE=PERITONEAL CAVITY;
 RX MEDLINE; 91378900.
 RA JOSE P.J., COLLINS P.D., PERKINS J.A., BEAUBIEN B.C., TOTTY N.F.,
 RA WATERFIELD M.D., HSUAN J., WILLIAMS T.J.;
 RT "Identification of a second neutrophil-chemoattractant cytokine
 RT generated during an inflammatory reaction in the rabbit peritoneal
 RT cavity in vivo. Purification, partial amino acid sequence and
 RT structural relationship to melanoma-growth-stimulatory activity";
 RL BIOCHEM. J. 278:493-497(1991).
 CC -1- FUNCTION: HAS CHEMOTACTIC ACTIVITY FOR NEUTROPHILS (BY
 CC SIMILARITY).
 CC -1- SUBUNIT: HOMODIMER (PROBABLE).
 CC -1- INDUCTION: GENERATED DURING AN INFLAMMATORY REACTION.
 CC -1- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
 C-X-C) (CHEMOKINE CX-C).
 CC -----
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 CC -----
 CC EMBL; L19157; G309960;
 DR PIR; S17507; S17507.
 DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; PARTIAL.
 DR PFAM; PF000048; i18; 1.
 DR HSSP; P09341; 1MSH.
 CC CYTOKINE; GROWTH FACTOR; INFLAMMATORY RESPONSE.
 FT DISULFID 7 33 BY SIMILARITY.
 FT DISULFID 9 49 BY SIMILARITY.
 FT CONFLICT 20 20 N -> S (IN REF. 2).
 FT CONFLICT 23 23 N -> S (IN REF. 2).
 FT NON_TER 71 71
 SQ SEQUENCE 71 AA; 7713 MW; C1371890 CRC32;
 Query Match 66.3%; Score 57; DB 1; Length 71;
 Best Local Similarity 80.0%; Pred. No. 6 07e-02;
 Matches 8; Conservative 1; Mismatches 1; Indels 0; Gaps 0;
 Db 48 ACRNPAAPMV 57
 Qy 2 ACLNPASPMV 11
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```

RESULT 14
ID RPOB_NEIME STANDARD; PRT: 1389 AA.
AC Q59622;
DT 01-NOV-1997 (REL. 35, CREATED)
DT 01-NOV-1997 (REL. 35, LAST SEQUENCE UPDATE)
DT 15-DEC-1998 (REL. 37, LAST ANNOTATION UPDATE)
DE DNA-DIRECTED RNA POLYMERASE BETA CHAIN (PC 2.7.7.6) (TRANSCRIPTASE
DE BETA CHAIN) (RNA POLYMERASE BETA SUBUNIT).
GN RPOB.
OS NEISSERIA MENINGITIDIS.
OC BACTERIA; PROTEOBACTERIA; BETA SUBDIVISION; NEISSERIACEAE; NEISSERIA.
CC [1]
RN SEQUENCE FROM N.A.
RP STRAIN-BNCV;
RC
RA NOLTE O.J.;
RL SUBMITTED (OCT-1995) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -!- FUNCTION: DNA-DEPENDENT RNA POLYMERASE CATALYZES THE TRANSCRIPTION
CC OF DNA INTO RNA USING THE FOUR RIBONUCLEOSIDE TRIPHOSPHATES AS
CC SUBSTRATES.
CC -!- CATALYTIC ACTIVITY: N NUCLEOSIDE TRIPHOSPHATE = N PYROPHOSPHATE +
CC RNA(N).
CC -!- SUBUNIT: THE ENZYME CONSISTS OF THE SIGMA CHAIN AND THE CORE
CC ENZYME WHICH IS COMPOSED OF 2 ALPHA CHAINS, 1 BETA CHAIN, AND 1
CC BETA' CHAIN.
CC -!- SIMILARITY: BELONGS TO THE RNA POLYMERASE BETA CHAIN FAMILY.
CC -----
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CC -----
DR EMBL; Z54353; E244390; -.
DR PROSITE; PS01166; RNA_POL_BETA; 1.
DR PFAM; PF00562; RNA_POL_B; 1.
KW TRANSFERASE; TRANSCRIPTION; DNA-DIRECTED RNA POLYMERASE.
SQ SEQUENCE 1389 AA: 155579 MW; 5B84C720 CRC32;

Query Match 66.3%; Score 57; DB 1; Length 1389;
Best Local Similarity 70.0%; Pred.No. 6.07e-02; Indels 0; Gaps 0;
Matches 7; Conservative 0; Mismatches 3;

Db 717 ACLRPEKPMV 726
QY 2 ACLNPASPMV 11
    ||| | |||
    ||| | |||

RESULT 15
ID GRO2_RABIT STANDARD; PRT: 104 AA.
AC P47854;
DT 01-FEB-1996 (REL. 33, CREATED)
DT 01-FEB-1996 (REL. 33, LAST SEQUENCE UPDATE)
DT 01-FEB-1996 (REL. 33, LAST ANNOTATION UPDATE)
DE GROWTH REGULATED PROTEIN HOMOLOG PRECURSOR (GRO HOMOLOG).
OS ORYCTOLAGUS CUNICULUS (RABBIT).
OC EUKARYOTA; METAZOA; CHORDATA; VERTEBRATA; MAMMALIA; EUTHERIA;
OC LAGOMORPHA; LEPORIDAE; ORYCTOLAGUS.
RN [1]
SEQUENCE FROM N.A.
RA SCHWARTZ D., CHAVERRI-ALAMADA L., BERLINER J., KIRCHGESNER T.,
RA QUISOMORO D., FANG J., TEKAMP-OLSON P., LUSIS J., FOGELMAN A.,
RA TERRITO M.;
RL SUBMITTED (JUL-1994) TO EMBL/GENBANK/DBJ DATA BANKS.
CC -!- FUNCTION: PLAYS A ROLE IN MONOCYTE ADHESION TO THE ENDOTHELIUM.
CC -!- SIMILARITY: BELONGS TO THE INTERCRINE ALPHA FAMILY (SMALL CYTOKINE
CC C-X-C) (CHEMOKINE CXC).
CC -----
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CC -----
DR EMBL; U12310; G520743; -.
DR PROSITE; PS00471; SMALL_CYTOKINES_CXC; 1.
DR PFAM; PF00048; I18; 1.
DR HSP; P09341; IMGs.
KW CYTOKINE; GROWTH FACTOR; INFLAMMATORY RESPONSE; SIGNAL.
FT SIGNAL 1 31 PROBABLE.
FT CHAIN 32 104 GROWTH REGULATED PROTEIN HOMOLOG.
FT DISULFID 40 66 BY SIMILARITY.
FT DISULFID 42 82 BY SIMILARITY.
SQ SEQUENCE 104 AA: 10900 MW; C75AEF07 CRC32;

Query Match 64.0%; Score 55; DB 1; Length 104;
Best Local Similarity 66.7%; Pred.No. 1.82e-01; Indels 0; Gaps 0;
Matches 6; Conservative 3; Mismatches 0;

Db 82 CLNPAPV 90
QY 3 CLNPASPMV 11
    |||||:|:|
    |||||:|:|

Search completed: Fri Feb 4 18:15:14 2000
Job time : 7 secs.

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Db      39  ACLDPEAPMVQ 49
QY      2  ACLNPASPMVQ 12

RESULT  5
ENTRY   JN0572      #type complete
TITLE   neutrophil chemo-attractant Gro protein precursor - rat
ALTERNATE_NAMES CINC; cytokine-induced neutrophil chemoattractant; interleukin-8-like chemokine
ORGANISM #formal_name Rattus norvegicus #common_name Norway rat
DATE     30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 08-Sep-1997
ACCESSION JN0572; JQ1519; A34481; A48988; B48988; S51214
REFERENCE JN0572
#authors Konishi, K.; Takata, Y.; Yamamoto, M.; Yomogida, K.; Watanabe, K.; Tsurufuji, S.; Fujioka, M.
#journal Gene (1993) 126:285-286
#title Structure of the gene encoding rat neutrophil chemo-attractant Gro.
#cross-references MUID:93246259
#accession JN0572
##molecule_type DNA
##residues 1-96 ##label KON
##cross-references DBJ:DL1445; NID:g391854; PID:d1002491; PID:g220755
REFERENCE JQ1519
#authors Huang, S.; Paulauskis, J.D.; Kobzik, L.
#journal Biochem. Biophys. Res. Commun. (1992) 184:922-929
#title Rat KC cDNA cloning and mRNA expression in lung macrophages and fibroblasts.
#cross-references MUID:92246987
#accession JQ1519
##molecule_type mRNA
##residues 1-32,'34-96 ##label HUA
##cross-references GB:M6536
##experimental_source authors alveolar macrophage
##note the authors translated the codon AGT for residue 33 as Cys, AAC for residue 46 as Gln
REFERENCE A34481
#authors Watanabe, K.; Konishi, K.; Fujioka, M.; Kinoshita, S.; Nakagawa, H.
#journal J. Biol. Chem. (1989) 264:19559-19563
#title The neutrophil chemoattractant produced by the rat kidney epithelioid cell line NRK-52E is a protein related to the KC/gro protein.
#cross-references MUID:90062049
#accession A34481
##molecule_type protein
##residues 25-96 ##label WAT
REFERENCE A48988
#authors Nakagawa, H.; Ikesue, A.; Hatakeyama, S.; Kato, H.; Gotoda, T.; Komorita, N.; Watanabe, K.; Miyai, H.
#journal Biochem. Pharmacol. (1993) 45:1425-1430
#title Production of an interleukin-8-like chemokine by cytokine-stimulated rat NRK-49F fibroblasts and its suppression by anti-inflammatory steroids.
#cross-references MUID:93228656
#accession A48988
##status preliminary
##molecule_type protein
##residues 25-57 ##label NAK
##experimental_source kidney, NRK-49F fibroblasts
##note sequence extracted from NCBI backbone (NCBIP:129132)
#accession B48988
##status preliminary
##molecule_type protein
##residues 25-57 ##label NAK2
##experimental_source kidney, NRK-49F fibroblasts
##note sequence extracted from NCBI backbone (NCBIP:129131)
REFERENCE S51214
#authors Hanzawa, H.; Haruyama, H.; Watanabe, K.; Tsurufuji, S.
#journal FEBS Lett. (1994) 354:207-212
#title The three dimensional structure of rat cytokine CINC/Gro in
  
```

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#cross-references MUID:95046335
#contents annotation; conformation by (1)H-NMR, residues 25-96
#accession S51214
##molecule_type protein
##residues 25-96 ##label HAN
COMMENT This protein has chemotactic activity for neutrophils and has melanoma growth-stimulating activity.
GENETICS
#gene gro; KC
#introns 24/1; 65/2; 92/2
CLASSIFICATION #superfamily beta-thromboglobulin
KEYWORDS cytokine; disulfide bond
FEATURE 1-24
25-96 #domain signal sequence #status predicted #label SIG\
#product neutrophil chemo-attractant Gro protein #status experimental #label Cyt
SUMMARY #length 96 #molecular-weight 10249 #checksum 5749
Query Match 82.6%; Score 71; DB 2; Length 96;
Best Local Similarity 72.7%; Pred. No. 1.22e-04;
Matches 8; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
Db 74 ACLDPEAPMVQ 84
QY 2 ACLNPASPMVQ 12

RESULT 6
ENTRY A28414 #type complete
TITLE melanoma growth-stimulatory activity precursor - human
ALTERNATE_NAMES fibroblast-derived neutrophil-activating protein gamma; GRO-alpha; growth regulated protein; MGSA; NAP-3 melanoma mitogenic protein
ORGANISM #formal_name Homo sapiens #common_name man
DATE 30-Jun-1989 #sequence_revision 30-Jun-1989 #text_change 08-Sep-1997
ACCESSIONS S13669; A28414; S00983; B60401; S03976; A47626; B46519
REFERENCE S13669
#authors Baker, N.E.; Kucera, G.; Richmond, A.
#journal Nucleic Acids Res. (1990) 18:6453
#title Nucleotide sequence of the human melanoma growth stimulatory activity (MGSA) gene.
#cross-references MUID:91057157
#accession S13669
##status preliminary
##molecule_type DNA
##residues 1-107 ##label BAK
##cross-references EMBL:X54489; NID:g34625; PID:g34626
REFERENCE A94184
#authors Anisowicz, A.; Bardwell, L.; Sager, R.
#journal Proc. Natl. Acad. Sci. U.S.A. (1987) 84:7188-7192
#title Constitutive overexpression of a growth-regulated gene in transformed Chinese hamster and human cells.
#cross-references MUID:88041072
#accession A28414
##molecule_type mRNA
##residues 1-107 ##label ANI
##cross-references GB:J03561; NID:g183622; PID:g306806
REFERENCE S00983
#authors Richmond, A.; Balentien, E.; Thomas, H.G.; Flaggs, G.; Barton, D.E.; Spiess, J.; Bordon, R.; Francke, U.; Derynck, R.
#journal EMBO J. (1988) 7:2025-2033
#title Molecular characterization and chromosomal mapping of melanoma growth stimulatory activity, a growth factor structurally related to beta-thromboglobulin.
#cross-references MUID:88328991
#accession S00983
##molecule_type mRNA
##residues 1-107 ##label RIC
##cross-references EMBL:X12510; NID:g34621; PID:g34622
REFERENCE A60401
  
```

```

#authors Schroeder, J.M.; Sticherling, M.; Henneicke, H.H.; Preissner,
#journal W.C.; Christophers, E.
#title J. Immunol. (1990) 144:2223-2232
#cross-references MUIID:90187866
#accession B60401
#molecule_type protein
#residues 35-42,'X',44,'X',46-48 ##label SCH
#experimental_source dermal fibroblasts
REFERENCE S03975
#authors Golds, E.E.; Mason, P.; Nyirkos, P.
#journal Biochem. J. (1989) 259:585-588
#title Inflammatory cytokines induce synthesis and secretion of gro
protein and a neutrophil chemotactic factor but not
beta-2-microglobulin in human synovial cells and
fibroblasts.
#cross-references MUIID:89246368
#accession S03976
#molecule_type protein
#residues 35-41,'X',43-49,'X',51-52,'XX',55-57 ##label GOL
REFERENCE A47626
#authors Schroeder, J.M.; Persoon, N.L.M.; Christophers, E.
#journal J. Exp. Med. (1990) 171:1091-1100
#title Lipopolysaccharide-stimulated human monocytes secrete, apart
from neutrophil-activating peptide 1/interleukin 8, a
second neutrophil-activating protein. NH-2-terminal amino
acid sequence identity with melanoma growth stimulatory
activity.
#accession A47626
#molecule_type protein
#residues 35-63,'X',65 ##label SC2
#experimental_source LPS-stimulated monocytes
REFERENCE A46519
#authors Proost, P.; De Wolf-Peeters, C.; Conings, R.; Opdenakker, G.;
Billiau, A.; Van Damme, J.
#journal J. Immunol. (1993) 150:1000-1010
#title Identification of a novel granulocyte chemotactic protein
(GCP-2) from human tumor cells. In vitro and in vivo
comparison with natural forms of GRO, IP-10, and IL-8.
#cross-references MUIID:93139489
#accession B46519
#molecule_type protein
#residues 35-62 ##label PRO
#experimental_source MG-63 osteosarcoma cells
GENETICS
#gene GDB:GRO1
#cross-references GDB:120181; OMIM:155730
#map_position 4q21-4q21
CLASSIFICATION #superfamily beta-thromboglobulin
FEATURE
1-34 #domain signal sequence #status predicted #label SIG\
35-107 #product melanoma growth-stimulatory activity #status
experimental #label MAT
SUMMARY #length 107 #molecular-weight 11301 #checksum 1301
Query Match 81.4%; Score 70; DB 2; Length 107;
Best Local Similarity 90.9%; Pred. No. 2.12e-04;
Matches 10; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 83 KACLNPASPIV 93
QY 1 KACLNPASPMV 11
|||||||
RESULT 7 JH0200 #type complete
ENTRY macrophage inflammatory protein 2 precursor - mouse
TITLE #formal_name Mus musculus #common_name house mouse
ORGANISM 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change
DATE 08-Sep-1997
ACCESSIONS JH0200; A32190

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REFERENCE JH0200
#authors Tekamp-Olson, P.; Gallegos, C.; Bauer, D.; McClain, J.;
Sherry, B.; Fabre, M.; van Deventer, S.; Cerami, A.
#journal J. Exp. Med. (1990) 172:911-919
#title Cloning and characterization of cDNAs for murine macrophage
inflammatory protein 2 and its human homologues.
#cross-references MUIID:90354792
#accession JH0200
#molecule_type mRNA
#residues 1-100 ##label TEK
#cross-references GB:X53798; NID:g53128; PID:g53129
REFERENCE A32190
#authors Wolpe, S.D.; Sherry, B.; Juers, D.; Davatelis, G.; Yurt,
R.W.; Cerami, A.
#journal Proc. Natl. Acad. Sci. U.S.A. (1989) 86:612-616
#title Identification and characterization of macrophage
inflammatory protein 2.
#cross-references MUIID:89098980
#accession A32190
#molecule_type protein
#residues 28-59 ##label WOL
CLASSIFICATION #superfamily beta-thromboglobulin
KEYWORDS heparin binding
FEATURE
1-27 #domain signal sequence #status predicted #label SIG\
28-100 #product macrophage inflammatory protein 2 #status
experimental #label MAT
SUMMARY #length 100 #molecular-weight 10621 #checksum 8720
Query Match 77.9%; Score 67; DB 2; Length 100;
Best Local Similarity 58.3%; Pred. No. 1.11e-03;
Matches 7; Conservative 3; Mismatches 2; Indels 0; Gaps 0;
Db 76 KVCIDPEAPLVQ 87
QY 1 KACLNPASPMVQ 12
|||||
RESULT 8
ENTRY gro-alpha precursor - mouse
TITLE gro protein: growth regulated protein; melanoma
ALTERNATE_NAMES growth-stimulating activity factor; melanoma mitogenic
protein; secretory protein N51
ORGANISM #formal_name Mus musculus #common_name house mouse
DATE 20-Oct-1989 #sequence_revision 20-Oct-1989 #text_change
08-Sep-1997
ACCESSIONS A32954; JH0081
REFERENCE A32954
#authors Oquendo, P.; Alberta, J.; Wen, D.; Graycar, J.L.; Derynck,
R.; Stiles, C.D.
#journal J. Biol. Chem. (1989) 264:4133-4137
#title The platelet-derived growth factor-inducible KC gene encodes
a secretory protein related to platelet alpha-granule
proteins.
#cross-references MUIID:89139485
#accession A32954
#molecule_type mRNA
#residues 1-96 ##label OQU
#cross-references GB:J04596; NID:g201042; PID:g201043
REFERENCE JH0081
#authors Ryseck, R.P.; MacDonald-Bravo, H.; Mattei, M.G.; Bravo, R.
#journal Exp. Cell Res. (1989) 180:266-275
#title Cloning and sequence of a secretory protein induced by growth
factors in mouse fibroblasts.
#cross-references MUIID:89078502
#accession JH0081
#molecule_type mRNA
#residues 1-96 ##label RYS
COMMENT This protein is basic and lacks threonine, phenylalanine, and
tyrosine.
GENETICS
#map_position 5

```

CLASSIFICATION #superfamily beta-thromboglobulin
KEYWORDS extracellular protein

FEATURE
1-24 #domain signal sequence #status predicted #label SIC
25-96 #product gro-alpha #status predicted #label MAT
SUMMARY #length 96 #molecular-weight 10254 #checksum 5052

Query Match 74.4%; Score 64; DB 2; Length 96;
Best Local Similarity 63.6%; Pred. No. 5.59e-03;
Matches 7; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

Db 74 ACLDPEAPLVQ 84
||||:|:|
QY 2 ACLNPASPMVQ 12

RESULT 9
ENTRY I51886 #type fragment
TITLE macrophage inflammatory protein-2 - rat (fragment)
ORGANISM #formal_name Rattus sp. #common_name rat
DATE 12-Aug-1996 #sequence_revision 12-Aug-1996 #text_change 16-Feb-1997

ACCESSIONS I51886
REFERENCE I51886
#authors Huang, S.; Paulauskis, J.D.; Godleski, J.J.; Kobzik, L.
#journal Am. J. Pathol. (1992) 141:981-988
#title Expression of macrophage inflammatory protein-2 and KC mRNA in pulmonary inflammation.

#cross-references MUID:93035653
#accession I51886

##status preliminary; translated from GB/EMBL/DBJ
##molecule_type mRNA

##residues 1-53 ##label RES
##cross-references GB:S45855; NID:g257054

CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 53 #checksum 9622

Query Match 72.1%; Score 62; DB 2; Length 53;
Best Local Similarity 70.0%; Pred. No. 1.61e-02;
Matches 7; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 40 CLNPAPLVQ 49
||||:|:|
QY 3 CLNPASPMVQ 12

RESULT 10
ENTRY I55614 #type complete
TITLE macrophage inflammatory protein-2 - rat
ORGANISM #formal_name Rattus sp. #common_name rat
DATE 26-Jul-1996 #sequence_revision 26-Jul-1996 #text_change 16-Feb-1997

ACCESSIONS I55614
REFERENCE I55614

#authors Feng, L.; Xia, Y.; Yoshimura, T.; Wilson, C.B.
#journal J. Clin. Invest. (1995) 95:1009-1017
#title Modulation of neutrophil influx in glomerulonephritis in the rat with anti-macrophage inflammatory protein-2 (MIP-2) antibody.

#cross-references MUID:95189993
#accession I55614

##status preliminary; translated from GB/EMBL/DBJ
##molecule_type mRNA

##residues 1-100 ##label RES
##cross-references GB:S77604; NID:g998406; PID:g998407

CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 100 #molecular-weight 10783 #checksum 709

Query Match 72.1%; Score 62; DB 2; Length 100;
Best Local Similarity 70.0%; Pred. No. 1.61e-02;
Matches 7; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 78 CLNPAPLVQ 87

QY 3 CLNPASPMVQ 12
||||:|:|

RESULT 11
ENTRY S21467 #type complete
TITLE macrophage inflammatory protein 2 - rat
ORGANISM #formal_name Rattus norvegicus #common_name Norway rat
DATE 20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change 08-Sep-1997

ACCESSIONS S21467; D48988
REFERENCE S21467

#authors Driscoll, K.
#submission submitted to the EMBL Data Library, April 1992
#accession S21467

##status preliminary
##molecule_type mRNA

##residues 1-100 ##label DRI
##cross-references EMBL:X65647; NID:g56665; PID:g56666

REFERENCE A48988
#authors Nakagawa, H.; Ikesue, A.; Hatakeyama, S.; Kato, H.; Gotoda, T.; Komori, N.; Watanabe, K.; Miyai, H.

#journal Biochem. Pharmacol. (1993) 45:1425-1430
#title Production of an interleukin-8-like chemokine by cytokine-stimulated rat NRK-49F fibroblasts and its suppression by anti-inflammatory steroids.

#cross-references MUID:93228636
#accession D48988

##status preliminary
##molecule_type protein

##residues 32-45 ##label NAK
##experimental_source kidney, NRK-49F fibroblasts

##note sequence extracted from NCBI backbone (NCBIP:129129)
##superfamily beta-thromboglobulin

CLASSIFICATION #length 100 #molecular-weight 10783 #checksum 709
SUMMARY

Query Match 72.1%; Score 62; DB 2; Length 100;
Best Local Similarity 70.0%; Pred. No. 1.61e-02;
Matches 7; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

Db 78 CLNPAPLVQ 87
||||:|:|
QY 3 CLNPASPMVQ 12

RESULT 12
ENTRY A29029 #type fragment
TITLE gag polyprotein - mouse mammary tumor virus (strain C3H) (fragment)
ORGANISM #formal_name mouse mammary tumor virus, MMTV
DATE 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 29-Jan-1999

ACCESSIONS A29029
REFERENCE A94161

#authors Jacks, T.; Townsley, K.; Varmus, H.E.; Majors, J.
#journal Proc. Natl. Acad. Sci. U.S.A. (1987) 84:4298-4302
#title Two efficient ribosomal frameshifting events are required for synthesis of mouse mammary tumor virus gag-related polyproteins.

#cross-references MUID:87231993
#accession A29029

##status preliminary; translated from GB/EMBL/DBJ
##molecule_type DNA

##residues 1-233 ##label JAC
##cross-references GB:M16766; NID:g332107; PID:g332108

GENETICS
#gene gag

CLASSIFICATION #superfamily mouse mammary tumor virus gag polyprotein
KEYWORDS core protein; DNA binding; polyprotein
SUMMARY #length 233 #checksum 5628

Query Match 61.6%; Score 53; DB 2; Length 233;
Best Local Similarity 41.7%; Pred. No. 1.52e+00;

Matches 5; Conservative 7; Mismatches 0; Indels 0; Gaps 0;

Db 123 RACLDASPAVQ 134
:||||:|||||
Qy 1 KACLNPASPMVQ 12

RESULT 13
ENTRY FOMVM #type complete
TITLE gag polyprotein - mouse mammary tumor virus
ORGANISM #formal_name mouse mammary tumor virus, MMTV
DATE 31-Mar-1989 #sequence_revision 31-Mar-1989 #text_change 14-Nov-1997

ACCESSIONS A26795
REFERENCE A93030
#authors Moore, R.; Dixon, M.; Smith, R.; Peters, G.; Dickson, C.
#journal J. Virol. (1987) 61:480-490
#title Complete nucleotide sequence of a milk-transmitted mouse mammary tumor virus: two frameshift suppression events are required for translation of gag and pol.

#cross-references MUID:87112944
#accession A26795
##molecule_type DNA
##residues 1-591 #label MOO
##cross-references EMBL:M15122; NID:g332127; PID:g332130

GENETICS
#gene gag
CLASSIFICATION #superfamily mouse mammary tumor virus gag polyprotein
KEYWORDS core protein; DNA binding; polyprotein
SUMMARY #length 591 #molecular-weight 66269 #checksum 4227

Query Match 61.6%; Score 53; DB 1; Length 591;
Best Local Similarity 41.7%; Pred. No. 1.52e+00;
Matches 5; Conservative 7; Mismatches 0; Indels 0; Gaps 0;

Db 481 RACLDASPAVQ 492
:||||:|||||
Qy 1 KACLNPASPMVQ 12

RESULT 14
ENTRY S20444 #type complete
TITLE leukotriene-A4 hydrolase (EC 3.3.2.6) - rat
ORGANISM #formal_name Rattus norvegicus #common_name Norway rat
DATE 22-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 29-Jan-1999

ACCESSIONS S20444
REFERENCE S20444
#authors Makita, N.; Funk, C.D.; Imai, E.; Hoover, R.L.; Badr, K.F.
#journal FEBS Lett. (1992) 299:273-277
#title Molecular cloning and functional expression of rat leukotriene A(4) hydrolase using the polymerase chain reaction.

#cross-references MUID:92183952
#accession S20444
##molecule_type mRNA
##residues 1-610 #label MAK
##cross-references GB:S87522; NID:g247155; PID:g247156
CLASSIFICATION #superfamily leukotriene-A4 hydrolase
KEYWORDS ether hydrolase
SUMMARY #length 610 #molecular-weight 69175 #checksum 9336

Query Match 61.6%; Score 53; DB 2; Length 610;
Best Local Similarity 45.3%; Pred. No. 1.52e+00;
Matches 5; Conservative 5; Mismatches 1; Indels 0; Gaps 0;

Db 592 KACMHPVTAML 602
:||||:|||||
Qy 1 KACLNPASPMV 11

RESULT 15
ENTRY S42881 #type complete

platelet basic protein - pig
#formal_name Sus scrofa domestica #common_name domestic pig
06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 17-Mar-1999

ACCESSIONS S43460; S42881
REFERENCE S43460
#authors Power, C.A.; Proudfoot, A.E.I.; Magnenat, E.; Bacon, K.B.; Wells, T.N.C.
#journal Eur. J. Biochem. (1994) 221:713-719
#title Molecular cloning and characterisation of a neutrophil chemotactic protein from porcine platelets.

#cross-references MUID:94229068
#accession S43460
##status preliminary
##molecule_type mRNA
##residues 1-119 #label POW
##cross-references EMBL:X77935; NID:g457753; PID:g457754
CLASSIFICATION #superfamily beta-thromboglobulin
SUMMARY #length 119 #molecular-weight 12615 #checksum 9198

Query Match 60.5%; Score 52; DB 2; Length 119;
Best Local Similarity 45.5%; Pred. No. 2.45e+00;
Matches 5; Conservative 3; Mismatches 3; Indels 0; Gaps 0;

Db 94 KICLDPEAPRI 104
:||||:|||||
Qy 1 KACLNPASPMV 11

Search completed: Fri Feb 4 18:14:50 2000
Job time : 30 secs.

MIP-2-ALPHA

(TM)

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Mpsrch_pp protein - protein database search, using Smith-Waterman algorithm
Run on: Fri Feb 4 18:13:45 2000; MasPar time 3.51 Seconds
Tabular output not generated. 72.629 Million cell updates/sec

Title: >US-09-150-813-74
Description: (1-12) from US09150813.pep
Perfect Score: 86
Sequence: 1 KACLNPAQPMVQ 12
Scoring table: PAM 150
Gap 15

Searched: 170751 seqs, 21266608 residues
Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: a-geneseq35
1:part1 2:part2 3:part3 4:part4 5:part5 6:part6 7:part7
8:part8 9:part9 10:part10 11:part11 12:part12 13:part13
14:part14 15:part15 16:part16 17:part17 18:part18
19:part19 20:part20 21:part21 22:part22 23:part23
24:part24 25:part25 26:part26 27:part27 28:part28
29:part29 30:part30 31:part31 32:part32 33:part33
34:part34 35:part35 36:part36 37:part37 38:part38
39:part39

Statistics: Mean 16.868; Variance 48.677; scale 0.347
Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES					
Result No.	Score	Match %	Length	Description	Pred. No.
1	86	100.0	73 39	Human mature gro-gamma	3.48e-03
2	86	100.0	73 25	Human chemokine gro g	3.48e-03
3	86	100.0	73 23	Chimeric interleukin-	3.48e-03
4	86	100.0	73 17	Protein used to gener	3.48e-03
5	86	100.0	73 7	MIP-2beta.	3.48e-03
6	86	100.0	73 12	Human gro-gamma chemo	3.48e-03
7	86	100.0	73 24	Human chemokine gro g	3.48e-03
8	86	100.0	106 4	Human gro gamma cytol	3.48e-03
9	86	100.0	107 4	Human macrophage infl	3.48e-03
10	86	100.0	107 4	Human macrophage infl	3.48e-03
11	86	100.0	107 13	Gro-gamma/MIP-2-beta.	3.48e-03
12	79	91.9	73 39	Human gro-beta polype	2.65e-02
13	79	91.9	73 12	Human gro-beta chemok	2.65e-02
14	79	91.9	73 24	Human chemokine gro b	2.65e-02
15	79	91.9	73 25	Human chemokine gro b	2.65e-02
16	79	91.9	73 7	MIP-2alpha.	2.65e-02

17	79	91.9	102 13	R70793	Gro-beta/MIP-2-alpha.	2.65e-02
18	79	91.9	107 4	R23034	Human Gro beta cytol	2.65e-02
19	79	91.9	107 4	R20589	Human macrophage infl	2.65e-02
20	79	91.9	107 4	R20529	Human macrophage infl	2.65e-02
21	73	84.9	72 23	W14036	Chimeric interleukin-	1.47e-01
22	71	82.6	72 3	R14077	Cytokine and neutroph	2.58e-01
23	70	81.4	70 20	R99809	Chemokine-like protei	3.42e-01
24	70	81.4	73 39	W81498	Human mature gro-alph	3.42e-01
25	70	81.4	73 25	W18024	Human chemokine gro a	3.42e-01
26	70	81.4	73 12	R66698	Human gro-alpha chemo	3.42e-01
27	70	81.4	73 24	W17670	Human chemokine gro a	3.42e-01
28	70	81.4	101 20	R92318	Chemokine-like protei	3.42e-01
29	70	81.4	107 13	R70792	Melanoma growth stimu	3.42e-01
30	67	77.9	100 4	R20528	Murine macrophage inf	7.89e-01
31	67	77.9	100 26	R05790	Macrophage derived inf	7.89e-01
32	67	77.9	100 4	R20588	Murine macrophage inf	7.89e-01
33	64	74.4	72 12	R66697	Murine chemokine.	1.81e-00
34	64	74.4	72 25	W18023	Murine chemokine KC.	1.81e-00
35	64	74.4	72 24	W17669	Murine chemokine KC.	1.81e-00
36	64	74.4	72 39	W81497	Mouse mature KC polyp	1.81e-00
37	63	73.3	11 20	R99808	Active domain from me	2.38e-00
38	59	68.6	24 11	R58627	Putative glycan bindi	7.04e-00
39	59	68.6	24 35	W70292	GRO alpha.	7.04e-00
40	53	61.6	113 32	W50883	Amino acid sequence o	3.45e-01
41	52	60.5	32 13	R70805	Heparanase C-terminal	4.48e-01
42	52	60.5	69 13	R70789	Neutrophil activating	4.48e-01
43	52	60.5	75 25	W26467	Leukocyte derived gro	4.48e-01
44	52	60.5	128 3	R13519	CTAP(Leu21)/Lamb1-40	4.48e-01
45	52	60.5	135 2	R07984		

ALIGNMENTS

RESULT 1
ID W81500 standard; Protein; 73 AA.
AC W81500;
DC 01-MAR-1999 (first entry)
DE Human mature gro-gamma polypeptide used to treat sepsis.
KW Gro-gamma; chemokine; human; sepsis; septic shock; therapy.
OS Homo sapiens.
FH Key Location/Qualifiers
FT Protein 5..73
FT /note= "modified fragment, preferred for use in method of the invention"
PN WO9848828-A1.
PD 05-NOV-1998.
PF 29-APR-1998; U08742.
PR 29-APR-1997; US-846966.
PA (SMIK) SMITHKLINE BEECHAM CORP.
PI Demarsh PL, Johanson KO;
DR WPI; 99-024031/02.
PT Treating and preventing sepsis in animals - by using two modified gro b chemokines in conjunction with an anti-infective agent
PS Example 1; Page 19; 26pp; English.
CC This is the amino acid sequence of the human gro-gamma chemokine mature polypeptide. The invention relates to a method of preventing and treating sepsis using chemokines selected from mature or modified murine KC (see W81497), or human gro-alpha (see W81498), gro-beta (see W81499) or gro-gamma (see W81499). The modified gro-gamma comprises amino acids 5-73 of the mature polypeptide. A claimed method uses a dimer composed of 2 modified gro-beta chemokines. Further claimed is administering the chemokine in conjunction with an anti-infective agent. The chemokines described in this invention are required to treat and prevent sepsis since antimicrobial agents alone have failed to abrogate septic mortality.
SQ Sequence 73 AA;
Query Match 100.0%; Score 86; DB 39; Length 73;
Best Local Similarity 100.0%; Pred. No. 3.48e-03;
Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Db 49 kaclnpaspvmq 60
|||||||

QY 1 KACLNPASPMVQ 12

RESULT 2
 ID W18026 standard; protein; 73 AA.
 AC W18026;
 DT 30-JAN-1998 (first entry)
 DE Human chemokine gro gamma.
 KW Sepsis; septic shock; therapy; gro gamma; chemokine; human.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT 5..73
 FT Protein
 FT /note= "preferred modified fragment of KC
 (Claim 5)"
 PN WO9719173-A1.
 PD 29-MAY-1997.
 PF 20-NOV-1996; U18616.
 PR 21-NOV-1995; US-007425.
 PA (SMIK) SMITHKLINE BEECHAM CORP.
 PI DeMarsh PL, Johanson KO;
 DR WPI: 97-298111/27.
 PT Use of chemokine(s) such as KC and gro-alpha - to treat or prevent
 PT sepsis, particularly septic shock
 PS Claim 1; Page 19-20; 28pp; English.
 CC A claimed method of treating or preventing sepsis comprises
 CC administering to an animal an effective amount of a chemokine
 CC selected from mature murine KC (see W18023), human gro alpha (see
 CC W18024), human gro beta (see W18025) and human gro gamma (W18026),
 CC modified fragments of these chemokines and multimeric proteins
 CC comprising an association of two chemokine proteins. Sepsis can
 CC occur in hospitalised patients, and a consequence of bacterial
 CC sepsis is septic shock. The method of the invention provides a
 CC treatment for sepsis, particularly septic shock, which is a major
 CC cause of death in intensive care units. Septic shock syndrome
 CC apparently has intractable resistance to the effects of a variety
 CC of highly potent antimicrobial agents. Survival is increased by
 CC treatment with the chemokines, both prophylactically and after
 CC infection.
 SQ Sequence 73 AA;

Query Match 100.0%; Score 86; DB 25; Length 73;
 Best Local Similarity 100.0%; Pred. No. 3.48e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 kaclnpaspmvq 60
 QY 1 KACLNPASPMVQ 12
 |||||

RESULT 3
 ID W12434 standard; peptide; 73 AA.
 AC W12434;
 DT 08-OCT-1997 (first entry)
 DE Chimeric interleukin-8 receptor binding polypeptide G18I32G.
 KW Chimeric; IL-8; receptor mediated biological response; inhibition;
 KW signal transduction; chemokine; human.
 OS Chimeric-Homo sapiens.
 FH Key Location/Qualifiers
 FT 1..18
 FT region
 FT /note= "Amino acids 1 to 18 of SEQ ID NO:2 in the
 specification from GRO-gamma"
 FT region
 FT 19..33
 FT /note= "Amino acids 18 to 32 of SEQ ID NO:1 in the
 specification from human interleukin-8"
 FT 34..73
 FT /note= "Amino acids 34 to 73 of SEQ ID NO:2 in the
 specification from GRO-gamma"
 PN WO9700893-A1.
 PD 09-JAN-1997.
 PF 18-JUN-1996; U10536.
 PR 05-APR-1996; US-628893.
 PR 20-JUN-1995; US-493252.
 PR 27-JUN-1995; US-000698.

PA (CHIR) CHIRON CORP.
 PI Blaney J, Shyamala V, Siani M, Tekamp-Olson P, Wernette-Hammond ME;
 DR WPI: 97-087324/08.
 PT New chimeric interleukin-8 polypeptide(s) - used for modulating IL-8
 PT receptor-mediated biological responses, e.g. inhibiting signal
 PT transduction
 PS Claim 26; Page -: 38pp; English.
 CC The present sequence represents a specifically claimed chimeric
 CC polypeptide G18I32G derived from human interleukin-8 (IL-8) and
 CC GRO-gamma. This polypeptide and similar examples of chimeric
 CC chemokines (I46G53I and I18G46I53G) also derived from human IL-8
 CC and GRO-gamma, exhibit a chemokine protein structure capable
 CC of IL8R1 or IL8R2 binding. They can be used for modulating IL8
 CC receptor-mediated biological responses. In particular, they can be
 CC used for inhibiting IL8 receptor signal transduction.
 CC N.B. The present sequence is not shown in the specification but is
 CC derived from SEQ ID NO:1 and 2, see features table.
 SQ Sequence 73 AA;

Query Match 100.0%; Score 86; DB 23; Length 73;
 Best Local Similarity 100.0%; Pred. No. 3.48e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 kaclnpaspmvq 60

QY 1 KACLNPASPMVQ 12

RESULT 4

ID R93194 standard; protein; 73 AA.

AC R93194;

DT 31-JUL-1996 (first entry)

DE Protein used to generate IL-8/Gro(gamma) chimeric peptides.

KW Native; human; interleukin-8; specific binding domain; receptor;

KW amino-terminal loop; anti-parallel; beta-sheet; Greek key; substitution;

KW insertion; deletion; reduction; enhancement; chemo-attractant;

KW neutrophil; modulation; biological response.

OS Synthetic.

PN WO953376-A2.

PD 28-DEC-1995.

PF 20-JUN-1995; U07895.

PR 20-JUN-1994; US-262990.

PA (CHIR) CHIRON CORP.

PI Tekamp-Olson P, Venkatakrishna S, Wernette-Hammond ME;

DR WPI: 96-058413/06.

PT Interleukin-8 receptor 1 specific binding domain peptide(s) - used

PT to modulate IL-8R1 mediated biological response

PS Example 3; Page 42; 51pp; English.

CC This is the amino acid sequence of a protein (not designated in this

CC specification but thought to be GRO(gamma), an agonist of the human

CC interleukin (IL)-8 receptor type R2 (see WO92/00326)). The protein was

CC used to generate GRO(gamma)/IL-8R1 binding domain chimerae by replacing

CC selected residues from the GRO(gamma) protein with corresp. residues from

CC IL-8 (R88057). The chimeric proteins were used to generate peptides

CC comprising an IL-8R2 binding peptide with residues from the specific

CC binding domain for the IL-8 receptor type R1. These domains are found

CC in the amino-terminal loop and strand 3 of the 3 stranded anti-parallel

CC beta-sheet (Greek key) of IL-8. In particular, residues 11 (Lys),

CC 13 (Tyr), 15 (Lys), 47 (Arg), 48 (Glu), 49 (Leu) and 53 (Pro) of the

CC native IL-8 are important for binding to the IL-8 R1 receptor.

CC Substitutions, insertions or deletions of these residues may alter

CC (reduce or enhance) IL-8 binding to the R1 receptor. Since IL-8 is a

CC chemo-attractant for neutrophils, the peptides can be used to modulate

CC an IL-8R1 mediated biological response.

SQ Sequence 73 AA;

Query Match 100.0%; Score 86; DB 17; Length 73;

Best Local Similarity 100.0%; Pred. No. 3.48e-03;

Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 kaclnpaspmvq 60

QY 1 KACLNPASPMVQ 12

|||||

RESULT 5
 ID R36772 standard; protein; 73 AA.
 AC R36772;
 DT 29-SEP-1993 (first entry)
 DE MIP-2beta.
 KW Macrophage inflammatory protein; megakaryocytopoiesis; MIP-1; MIP-2;
 KW thrombocythemia; reactive thrombocytosis; stroke; emboli; platelet;
 KW myeloproliferative disorder.
 OS Homo sapiens.
 PN WO9309799-A.
 PD 27-MAY-1993.
 PF 13-NOV-1992; U09671.
 PR 15-NOV-1991; US-792988.
 PA (UYPE-) UNIV PENNSYLVANIA.
 PI Gewirtz AW;
 DR WPI; 93-182239/22.
 PT suppression of megakaryocytopoiesis - by administration of
 PT macrophage inflammatory protein-1 or -2
 PS Disclosure; Page 18; 26pp; English.
 CC A claimed method for reducing the no. of circulating platelets in the
 CC bloodstream of a mammal comprises admin. of MIP-1 and/or MIP-2 or
 CC their analogues to induce such a reduction. The MIP-1, MIP-2 or
 CC analogue may be operatively linked to a carrier. The MIPs can be
 CC used to inhibit megakaryocytopoiesis to effect in vivo reduction of
 CC platelet nos. They can be used to treat disorders with excessively
 CC high platelet counts such as thrombocytosis, stroke, pulmonary emboli
 CC and myeloproliferative disorders.
 SQ Sequence 73 AA;

Query Match 100.0%; Score 86; DB 7; Length 73;
 Best Local Similarity 100.0%; Pred. No. 3.48e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 kaclnpaspvmq 60
 |||||
 QY 1 KACLNPAASPVMQ 12

RESULT 6
 ID R66700 standard; protein; 73 AA.
 AC R66700;
 DT 19-JUL-1995 (first entry)
 DE Human gro-gamma chemokine.
 KW Gro-alpha protein; chemokine; inflammation; antiinflammatory;
 KW hematopoietic synergistic factor; HSF; hematopoietic precursor;
 KW bone marrow; intercrine; desamino gro-gamma; truncation.
 OS Homo sapiens.
 FH Key
 FT Location/Qualifiers
 FT /note="desamino truncated gro-gamma, claim 10,
 FT page 69"
 PN WO9429341-A.
 PD 22-DEC-1994.
 PF 03-JUN-1994; U06264.
 PR 08-JUN-1993; US-073800.
 PA (SMIK) SMITHKLINE BEECHAM CORP.
 PI Balcarek JM, Bhatnagar P, King AG, Pelus LM;
 DR WPI; 95-036402/05.
 PT New truncated chemokine with increased biological activity - and
 PT related multimers, nucleic acid, antibodies etc., for treating
 PT inflammation, stimulating growth of bone marrow etc., also
 PT peptide(s) for inducing hematopoietic synergistic factor.
 PS Disclosure; Page 52; 89pp; English.
 CC Truncated, desamino chemokine comprising amino acids 5-73 of
 CC human mature gro-gamma (full sequence given in R66700)
 CC shows enhanced biological activity when compared to the mature
 CC protein, and has been used to prepare multimeric, modified
 CC chemokines.
 SQ Sequence 73 AA;

Query Match 100.0%; Score 86; DB 12; Length 73;

Best Local Similarity 100.0%; Pred. No. 3.48e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 kaclnpaspvmq 60
 |||||
 QY 1 KACLNPAASPVMQ 12

RESULT 7
 ID W17672 standard; Protein; 73 AA.
 AC W17672;
 DT 25-NOV-1997 (first entry)
 DE Human chemokine gro gamma.
 KW gro gamma; chemokine; intercrine; myelosuppression;
 KW immunosuppression; hematopoietic cell; infection; cancer;
 KW aplastic anaemia; autoimmune disease; stem cell transplant;
 KW therapy.
 OS Homo sapiens.
 FH Key
 FT Location/Qualifiers
 FT protein
 FT 5..73
 FT /note="preferred polypeptide (Claim 4)"

WO9715595-A1.
 PN 01-MAY-1997.
 PD 24-OCT-1996; U17074.
 PR 24-OCT-1995; US-547262.
 PA (SMIK) SMITHKLINE BEECHAM CORP.
 PI King AG, Pelus LM;
 DR WPI; 97-258957/23.
 PT Use of specific chemokine(s) for stem cell mobilisation - useful for
 PT treating myelosuppression or any condition involving
 PT immunosuppression or low levels of hematopoietic cells
 PS Claim 1; Page 21; 31pp; English.
 CC This polypeptide sequence comprises human gro gamma. Use of
 CC mammalian chemokines selected from gro alpha (W17670), gro beta
 CC (W17671), gro gamma or KC (W17669) for mobilising hematopoietic
 CC cells is claimed. The chemokines, optionally used together with a
 CC growth factor or other hematopoietic regulator, are used to treat
 CC myelosuppression or any condition that involves immunosuppression
 CC or low levels of hematopoietic cells, e.g. infection, cancer,
 CC myelopietic dysfunction, hematopoietic disorders, aplastic anaemia
 CC or autoimmune disease, or low production/differentiation of
 CC hematopoietic or bone marrow cells. A claimed application is in
 CC peripheral blood stem cell transplants in patients being treated by
 CC chemotherapy. Chemokines having an N-terminal deletion are more
 CC active, e.g. by 2 orders of magnitude, than the full-length protein.
 CC When used with a colony stimulating factor (CSF), a synergistic
 CC effect is achieved and the dose, and side-effects, of CSF can be
 CC reduced. Compared with conventional methods of stem cell transplants,
 CC use of mammalian chemokines provides a more rapid release of
 CC peripheral blood mononuclear cells and/or platelets, reducing risk of
 CC infection and allowing use of higher doses of chemotherapeutic
 CC agents.
 SQ Sequence 73 AA;

Query Match 100.0%; Score 86; DB 24; Length 73;
 Best Local Similarity 100.0%; Pred. No. 3.48e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 kaclnpaspvmq 60
 |||||
 QY 1 KACLNPAASPVMQ 12

RESULT 8
 ID R23035 standard; Protein; 106 AA.
 AC R23035;
 DT 26-OCT-1992 (first entry)
 DE Human Gro gamma cytokine.
 KW cytokine; inflammatory response; MAD-2; cancer diagnosis;
 KW colonic epithelial tumour cell.
 OS Homo sapiens.
 FH Key
 FT Location/Qualifiers
 FT peptide
 FT 1..34

FT /label= signal
 FT /note= "putative"
 FT 35..106
 FT /label= Gro_gamma
 PN WO9206196-A.
 PD 16-APR-1992.
 PF 24-SEP-1991; U06936.
 PR 28-SEP-1990; US-590223.
 PA (CETU) CETUS CORP.
 PI (DUNC-) UNIV OF NORTH CAROLINA.
 PI Haskill JS, Nitecki DE, Ralph P;
 DR WPI; 92-150882/18.
 DR N-PSDB: Q24267.
 PT Gro beta and Gro gamma inflammatory cytokine(s) - for use in
 PT diagnosing colon cancer
 PS Claim 25; Fig 1B; 46pp; English.
 CC The cDNA clone coding for inflammatory cytokine Gro-gamma was
 CC isolated from a mezerin- and calcium ionophore-stimulated leukocyte
 CC cDNA library. The amino acid sequence of gro gamma was deduced from
 CC the nucleotide sequence. The level of Gro gamma in inflammatory
 CC response cells can be used as an indication of a test substance's
 CC inflammatory activity and to diagnose certain cancers.
 CC See also Q24266.
 SQ Sequence 106 AA;

Query Match 100.0%; Score 86; DB 4; Length 106;
 Best Local Similarity 100.0%; Pred. No. 3.48e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 82 kaclnpasmvq 93
 |||||
 QY 1 KACLNPASPMVQ 12

RESULT 9
 ID R20530 standard; Protein; 107 AA.
 AC R20530;
 DT 23-APR-1992 (first entry)
 DE Human macrophage inflammatory protein (MIP) 2 beta.
 KW Inducible; secretory; inflammatory response; cytokine.
 OS Homo sapiens.
 FH Key
 FT Location/Qualifiers
 FT 1..34
 FT /label= signal
 PN WO9200326-A.
 PN WO9200327-A.
 PD 09-JAN-1992.
 PF 24-JUN-1991; U04482.
 PR 22-JUN-1990; US-541897.
 PR 19-JUN-1991; US-715194.
 PA (CHIR-) CHIRON CORP.
 PI Tekamp-Olson P, Gallegos CA;
 DR WPI; 92-041518/05.
 DR N-PSDB: Q20730.
 PT Human macrophage inflammatory protein 2-beta - for
 PT treating infections, cancer, myelopietic dysfunction and auto:
 PT immune diseases
 PS Disclosure; Fig 3; 68pp; English.
 CC The sequence was deduced from the DNA obtd. by screening the U937
 CC cDNA library prep. from poly-A+ RNA from PMA treated and LPS
 CC stimulated cells, using as probe a fragment isolated from the
 CC mMIP-2 cDNA (see Q20728) encoding most of the mature mMIP-2 amino
 CC acid sequence. Two classes of human cDNA homologous to mMIP-2 were
 CC found designated alpha and beta. The alpha form (Q20729) is
 CC claimed in WO9200327; the beta form reproduced here is claimed in
 CC WO9200326. The alpha form is the more abundant of the two. The
 CC genes can be used to produce recombinant MIP proteins for use in
 CC wound healing, to modulate myelopoiesis and to induce adjuvant
 CC activity.
 CC See also R20528,29 and R20588-90.
 SQ Sequence 107 AA;

Query Match 100.0%; Score 86; DB 4; Length 107;

Best Local Similarity 100.0%; Pred. No. 3.48e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Db 83 kaclnpasmvq 94
 |||||
 QY 1 KACLNPASPMVQ 12

RESULT 10
 ID R20530 standard; Protein; 107 AA.
 AC R20530;
 DT 23-APR-1992 (first entry)
 DE Human macrophage inflammatory protein (MIP) 2 beta.
 KW Inducible; secretory; inflammatory response; cytokine.
 OS Homo sapiens.
 FH Key
 FT Location/Qualifiers
 FT 1..34
 FT /label= signal
 PN WO9200326-A.
 PN WO9200327-A.
 PD 09-JAN-1992.
 PF 24-JUN-1991; U04478.
 PR 22-JUN-1990; US-541898.
 PR 19-JUN-1991; US-715195.
 PA (CHIR-) CHIRON CORP.
 PI Tekamp-Olson P, Gallegos CA;
 DR WPI; 92-041518/05.
 DR N-PSDB: Q20614.
 PT Human macrophage inflammatory protein 2-beta - for
 PT treating infections, cancer, myelopietic dysfunction and auto:
 PT immune diseases
 PS Disclosure; Fig 3; 68pp; English.
 CC The sequence was deduced by screening the U937 cDNA library prep.
 CC from poly-A+ RNA from PMA treated and LPS stimulated cells, using
 CC as probe a fragment isolated from the mMIP-2 cDNA (see Q20612)
 CC encoding most of the mature mMIP-2 amino acid sequence. Two classes
 CC of human cDNA homologous to mMIP-2 were found designated alpha and
 CC beta. The alpha form (Q20613) is claimed in WO9200327; the beta
 CC form reproduced here is claimed in WO9200326. The alpha form is the
 CC more abundant of the two. The genes can be used to produce
 CC recombinant MIP proteins for use in wound healing, to modulate
 CC myelopoiesis and to induce adjuvant activity.
 CC See also R20588,89 and R20528-30.
 SQ Sequence 107 AA;

Query Match 100.0%; Score 86; DB 4; Length 107;
 Best Local Similarity 100.0%; Pred. No. 3.48e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 83 kaclnpasmvq 94
 |||||
 QY 1 KACLNPASPMVQ 12

RESULT 11
 ID R70794 standard; Protein; 107 AA.
 AC R70794;
 DT 29-AUG-1995 (first entry)
 DE Gro-gamma/MIP-2-beta.
 KW Macrophage inflammatory protein 2-beta; gro-gamma/MIP-2-beta;
 KW heparanase; heparin; heparan sulfate; arthritis; restenosis;
 KW cancer; wound healing.
 OS Homo sapiens.
 PN WO9504158-A.
 PD 09-FEB-1995.
 PF 26-JUL-1994; U08207.
 PR 29-JUL-1993; US-099866.
 PR 13-OCT-1993; US-136117.
 PA (UFJO) UPOJOHN CO.
 PI Hoogwerf AJ, Ledbetter SR;
 DR WPI; 95-082239/11.
 DR N-PSDB: Q85364.
 PT Screening for cpds. with anti-heparanase activity - by detecting

PT inhibition of heparin or heparan sulphate degradation,
 PS potentially useful for treating arthritis, restenosis, cancer.
 PT Claim 12: Page 41-42; 60pp; English.
 CC Purified heparanases, prepared under reducing conditions and
 CC activated with transglutaminase, are given in R7086-804. Most
 CC are prepared by reverse transcription of mRNA from activated human
 CC leukocytes, then cloning of the cDNA into pVL1392 baculovirus
 CC vector, and expression in Sf9 cells in the presence of reduced
 CC glutathione and dithiothreitol.
 SQ Sequence 107 AA;

Query Match 100.0%; Score 86; DB 13; Length 107;
 Best Local Similarity 100.0%; Pred. No. 3.48e-03;
 Matches 12; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 83 kaclnpasmvq 94
 QY 1 KACLNPAAPMVQ 12
 |||||

RESULT 12

ID W81499 standard; Protein; 73 AA.

AC W81499; 1999 (first entry)

DE human gro-beta polypeptide used to treat sepsis.

KW Gro-beta; chemokine; human; sepsis; septic shock; therapy.

OS Mus sp.

FH Key Location/Qualifiers

FT Protein 5..73 /note= "claimed fragment"

FT WO9848828-A1.

PN 05-NOV-1998.

PD 29-APR-1998; U08742.

PF 29-APR-1997; US-846966.

PR (SMIK) SMITHKLINE BEECHAM CORP.

PA Demarsh PL, Johanson KO;

PI WPI; 99-024031/02.

PT Treating and preventing sepsis in animals - by using two modified
 gro b chemokines in conjunction with an anti-infective agent

PS Example 1: Page 18; 26pp; English.

CC This is the amino acid sequence of the human chemokine gro-beta

CC mature polypeptide. The invention relates to a method of

CC preventing and treating sepsis using chemokines selected from

CC mature or modified murine KC (see W81497), or human gro-alpha (see

CC W81498), gro-beta or gro-gamma (see W81499). A claimed method uses

CC a dimeric chemokine consisting of 2 covalently linked modified

CC gro-beta proteins (amino acids 5-73 of the mature polypeptide)

CC in which the proteins are linked by 2 intermolecular disulphide

CC bonds between C5-C31 and C7-C47. Further claimed is administering

CC the chemokine in conjunction with an anti-infective agent. The

CC chemokines described in this invention are required to treat and

CC prevent sepsis since antimicrobial agents alone have failed to

CC abrogate septic mortality.

SQ Sequence 73 AA;

Query Match 91.9%; Score 79; DB 39; Length 73;

Best Local Similarity 100.0%; Pred. No. 2.65e-02;

Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 kaclnpasmv 59
 QY 1 KACLNPAAPMV 11
 |||||

RESULT 13

ID R66699 standard; protein; 73 AA.

AC R66699;

DT 19-JUL-1995 (first entry)

DE Human gro-beta chemokine.

KW gro-alpha protein; chemokine; inflammation; antiinflammatory;

KW hematopoietic synergistic factor; HSf; hematopoietic precursor;

KW bone marrow; interleukine; desamino gro-beta; truncation.

OS Homo sapiens.

FH Key Location/Qualifiers

FT protein 5..73

FT /note= "desamino truncated gro-beta, claim 6,

FT page 68"

PN WO9429341-A.

PD 22-DEC-1994.

PF 03-JUN-1994; U06264.

PR 08-JUN-1993; US-073800.

PA (SMIK) SMITHKLINE BEECHAM CORP.

PI Balcarek JM, Bhatnagar P, King AG, Pelus LM;

DR WPI; 95-036402/05.

PT New truncated chemokine with increased biological activity - and
 PT related multimers, nucleic acid, antibodies etc., for treating
 PT inflammation, stimulating growth of bone marrow etc., also

PT peptide(s) for inducing haematopoietic synergistic factor.

PS Disclosure: Page 51-52; 89pp; English.

CC Truncated, desamino chemokine comprising amino acids 5-73 of

CC human mature gro-beta (full sequence given in R66699)

CC shows enhanced biological activity when compared to the mature

CC protein, and has been used to prepare multimeric, modified

CC chemokines.

SQ Sequence 73 AA;

Query Match 91.9%; Score 79; DB 12; Length 73;

Best Local Similarity 100.0%; Pred. No. 2.65e-02;

Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 kaclnpasmv 59
 QY 1 KACLNPAAPMV 11
 |||||

RESULT 14

ID W17671 standard; Protein; 73 AA.

AC W17671;

DE 25-NOV-1997 (first entry)

DT Human chemokine gro beta.

KW Gro beta; chemokine; interleukine; myelosuppression;

KW immunosuppression; haematopoietic cell; infection; cancer;

KW aplastic anaemia; autoimmune disease; stem cell transplant;

KW therapy.

OS Homo sapiens.

FH Key Location/Qualifiers

FT protein 5..73

FT /note= "preferred polypeptide (Claim 2)"

PN WO9715595-A1.

PD 01-MAY-1997.

PF 24-OCT-1996; U17074.

PR 24-OCT-1995; US-547262.

PA (SMIK) SMITHKLINE BEECHAM CORP.

PI King AG, Pelus LM;

DR WPI; 97-258957/23.

PT Use of specific chemokine(s) for stem cell mobilisation - useful for
 PT treating myelosuppression or any condition involving

PT immunosuppression or low levels of haematopoietic cells

PS Claim 1: Page 21; 31pp; English.

CC This polypeptide sequence comprises human gro beta. Use of

CC mammalian chemokines selected from gro alpha (W17670), gro beta,

CC gro gamma (W17672) or KC (W17669) for mobilising haematopoietic

CC cells is claimed. The chemokines, optionally used together with a

CC growth factor or other haematopoietic regulator, are used to treat

CC myelosuppression or any condition that involves immunosuppression

CC or low levels of haematopoietic cells, e.g. infection, cancer,

CC myelopietic dysfunction, haematopoietic disorders, aplastic anaemia

CC or autoimmune disease, or low production/differentiation of

CC haematopoietic or bone marrow cells. A claimed application is in

CC peripheral blood stem cell transplants in patients being treated by

CC chemotherapy. Chemokines having an N-terminal deletion are more

CC active, e.g. by 2 orders of magnitude, than the full-length protein.

CC When used with a colony stimulating factor (CSF), a synergistic

CC effect is achieved and the dose, and side-effects, of CSF can be

CC reduced. Compared with conventional methods of stem cell transplants,

CC use of mammalian chemokines provides a more rapid release of

CC peripheral blood mononuclear cells and/or platelets, reducing risk of
 CC infection and allowing use of higher doses of chemotherapeutic
 CC agents.
 SQ Sequence 73 AA;

Query Match 91.9%; Score 79; DB 24; Length 73;
 Best Local Similarity 100.0%; Pred. No. 2.65e-02;
 Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 kaclnpaspv 59
 |||||
 QY 1 KACLNPAAPMV 11

RESULT 15
 ID W18025 standard; protein; 73 AA.
 AC W18025;
 DT 30-JAN-1998 (first entry)
 DE Human chemokine gro beta.
 KW Sepsis; septic shock; therapy; gro beta; chemokine; human.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT Protein 5..73
 FT /note= "preferred modified fragment of KC
 (Claim 2)"
 PN WO9719173-A1.
 PD 29-MAY-1997.
 PF 20-NOV-1996; U18616.
 PR 21-NOV-1995; US-007425.
 PA (SMIK) SMITHKLINE BEECHAM CORP.
 PI DeMarsh PL, Johanson KO;
 DR WPI; 97-298111/27.
 PT Use of chemokine(s) such as KC and gro-alpha - to treat or prevent
 PT sepsis, particularly septic shock
 PS Claim 1; Page 19; 28pp; English.
 CC A claimed method of treating or preventing sepsis comprises
 CC administering to an animal an effective amount of a chemokine
 CC selected from mature murine KC (see W18023), human gro alpha (see
 CC W18024), human gro beta (W18025), and human gro gamma (see
 CC W18026), modified fragments of these chemokines and multimeric
 CC proteins comprising an association of two chemokine proteins.
 CC Sepsis can occur in hospitalised patients, and a consequence of
 CC bacterial sepsis is septic shock. The method of the invention
 CC provides a treatment for sepsis, particularly septic shock, which
 CC is a major cause of death in intensive care units. Septic shock
 CC syndrome apparently has intractable resistance to the effects of
 CC a variety of highly potent antimicrobial agents. Survival is
 CC increased by treatment with the chemokines, both prophylactically
 CC and after infection.
 SQ Sequence 73 AA;

Query Match 91.9%; Score 79; DB 25; Length 73;
 Best Local Similarity 100.0%; Pred. No. 2.65e-02;
 Matches 11; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 49 kaclnpaspv 59
 |||||
 QY 1 KACLNPAAPMV 11

Search completed: Fri Feb 4 18:14:04 2000
 Job time : 19 secs.